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**Trends
Analysis of
Coastal
Training
Programs in
the National
Estuarine
Research
Reserve
System**



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***Trends Analysis of Coastal Training Programs
of the National Estuarine Research Reserve System***

Introduction

The National Oceanic and Atmospheric Administration (NOAA) and the National Estuarine Research Reserves (NERRS) are conducting a review of coastal training program planning documents submitted by the Reserves to identify trends and commonalities in programming approach, types of partnerships, priority issues, target audiences and their needs, and characterizations of regional training markets.

The NERR system, a network of 26 protected areas representing different biogeographic regions of the United States, is a federal-state partnership administered by NOAA's Estuarine Reserves Division (ERD). ERD staff and state partners collaborate to set common priorities for NERR programs (such as the Coastal Training Program) to further the mission and goals of the NERRS. Reserve staff members work with local communities and regional groups to address coastal resource issues. Through integrated research and education, the Reserves serve as platforms for scientific investigation, monitors of environmental conditions, reference sites for resource management strategies, and assist communities in dealing successfully with coastal resource issues.

The NERRS Coastal Training Program provides science-based knowledge and skill-building opportunities to individuals responsible for making decisions affecting coastal resources. Coastal decision-makers in the CTP are defined as individuals that make decisions about coastal resources on a regular basis in a professional or volunteer capacity. Through this program, the Reserves can ensure that coastal decision- and policy-makers obtain the knowledge and tools they need to address critical coastal resource issues of concern to local communities and regions. The Coastal Training Program (CTP) builds upon years of Reserve experience in education and outreach to decision-makers, and incorporates an intensive strategic planning component. Prior to launching coastal training programs, Reserves conducted market analyses of local and regional training providers and assessed target audience needs relative to a range of coastal resource issues. As part of the planning process, the Reserves developed program planning documents outlining priority coastal issues to be addressed under the coastal training program umbrella, identified the audiences they planned to target over a three- to five-year period, and highlighted potential partnerships for design and delivery of programs. The Reserves work closely with state coastal programs, Sea Grant College extension and education staffs, and other local partners in determining key strategies to address coastal resource issues.

The CTP planning activities require the Reserves to:

1. Conduct a Market Analysis to identify and characterize the training provider market;

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2. Provide evidence of a Needs Assessment of a specific audience or set of audiences likely to be targeted by the Reserve in its CTP that describes knowledge, skills, training delivery preferences, and attitudes relevant to proposed training issues and topics;
3. Establish a CTP Advisory Committee, and provide a description of Committee membership, role, and operations;
4. Develop a Reserve-based coastal training program Strategy that outlines goals, objectives, and approach for a three- to five-year period; and
5. Develop a Marketing Strategy that discusses how the Reserve plans to promote and market its CTP.

While not a linear planning process, the Reserves completed these activities and submitted planning documents to the NERRS CTP Oversight Committee for review and feedback. The Oversight Committee is a cross-sectoral group comprised of Reserve, Sea Grant, and Coastal Management professionals from across the NERR system.

The Great Lakes Environmental Finance Center (GLEFC) was engaged by the NOAA/ERD to conduct a review and analysis of the CTP planning documents submitted to NOAA by the NERRS. Specifically, the objective of this review is to identify trends and commonalities in coastal training planning. In the following report, the GLEFC has identified trends and commonalities in program approaches, partnerships, priority issues, target audiences and their needs, and characteristics of regional training markets. The GLEFC developed an analytical framework to identify trends and commonalities in the CTP planning documents of the NERRS. The analysis was conducted through a complete reading and review of the CTP planning documents; telephone interviews with the NERRS CTP Coordinators and/or Education Specialists; and the synthesis of data and information into a matrix format for discussions and analyses with the GLEFC project faculty and staff. The project methodology is provided in detail in Appendix F of this report.

The data were examined and analyzed by Reserve and by NOAA-identified regions. The 18 Reserves participating in this analysis are included within these five NOAA regions:

- Gulf Region – Jobos Bay NERR (Puerto Rico), Rookery Bay NERR (Florida), Weeks Bay NERR (Alabama)
- Mid-Atlantic Region – Delaware NERR (Delaware), Jacques Cousteau-Mullica River NERR (New Jersey), Old Woman Creek NERR (Ohio)
- North East Region – Hudson River NERR (New York), Narragansett Bay NERR (Rhode Island), Waquoit Bay NERR (Massachusetts), Wells NERR (Maine)

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- Pacific Region – Elkhorn Slough NERR (California), Kachemak Bay NERR (Alaska), Padilla Bay NERR (Washington), South Slough NERR (Oregon)
- South East Region – Ace Basin NERR (South Carolina), North Carolina NERR (North Carolina), North Inlet-Winyah Bay NERR (South Carolina), Sapelo Island NERR (Georgia)

This report presents a synthesis and analysis of the CTP document reviews and the NERRS interviews, and identifies the commonalities prevalent among the NERRS as a result of the analysis. The Appendices of the report contain the mechanisms used to prepare the data and information for the analysis, the methodological approach to the project by the GLEFC, and profiles of the NERRS developed from the interviews with the Reserves. A separate Executive Summary report consolidates the overall commonalities and findings in a summary format.

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NERRS Coastal Training Program Trends and Commonalities

This section analyzes the relationship between the coastal training program planning documents reviewed and the interviews conducted with the NERRS coastal training and education staff. The synthesis of the planning documents and interviews identified commonalities and trends among the Reserves in the areas of:

- Priority coastal training topics and issues
- Overall program approach and training and delivery formats
- Target audiences
- Training needs as identified by the NERRS audiences
- Partnerships and collaborations
- Regional training providers
- Evaluation and monitoring techniques

The strategies and approaches utilized by the Reserves as the basis for their CTP planning activities are discussed in Appendix A. These strategies (methodologies) are summarized by Reserve for each segment of the CTP process – Advisory Council, Market Analysis, Needs Assessment, Strategic Plan, and Marketing Plan.

Trends in Priority Coastal Training Topics and Issues

Education and training programs for environmental policy and decision-makers, teachers, and students are and have been a long-standing component of the NERR system. Training sessions on a variety of topics are consistently offered and can be tailored to specific audiences. Effective education and training programs are dependent upon careful audience assessment, outcome-based objectives, relevant materials development, appropriate delivery, and thoughtful evaluation. Understanding the types of information that audiences need or possess, how these audiences gain relevant information, and what mechanisms are most useful in transferring relevant information is important to the CTP program development process.

During the Market Analysis and Needs Assessment phases of the CTP planning activities, the Reserves identified topical areas and issues needing to be addressed through coastal training activities. These topics and issues were then refined and prioritized, and included as part of Reserve strategies and marketing plans. These issues serve as topical areas for training in the Reserves' CTPs.

Due to the range and number of topics listed by the NERRS, the issues were grouped into categories of similar attributes. The categories are:

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- Land use planning – Includes issues of zoning, master plans, land use change, community, growth management, urban sprawl, and greenways.
- Infrastructure provision and management – Includes issues of septic, stormwater planning and management, bridges, sewage treatment, and best management practices.
- Habitat/wetlands/waterways protection – Includes issues relative to sensitive species, habitat, riparian, buffers, invasive species, endangered species, biodiversity, restoration, and marine protected areas.
- Scientific monitoring and study – Includes issues of remote sensing, floodplain science, marine nutrients, coastal processes, geology, climate change, and using GIS.
- Coastal planning/development/management – Includes issues pertaining to shoreline modifications, coastal hazards, and sustainable development.
- Economic development and cultural resources – Includes issues of aquaculture, energy, marinas, fisheries, tourism, visitor impacts, recreation impacts, and recreation.
- Air and water pollution control – Includes issues of deposition, non-point source, microbial pollution, and water quality issues.
- Regulatory enforcement/legal – Includes regulation issues, laws, and public use.
- NERRS programs and partners – Includes information sharing, resource sharing, “suites” of services, and core trainings.

The trends in priority coastal training topics and issues that emerged among the NERRS were in the areas of habitat protection and restoration and land use planning (see Figure 1 below). Shared priority issues of management or regulation were focused in the areas of land use planning and infrastructure planning.

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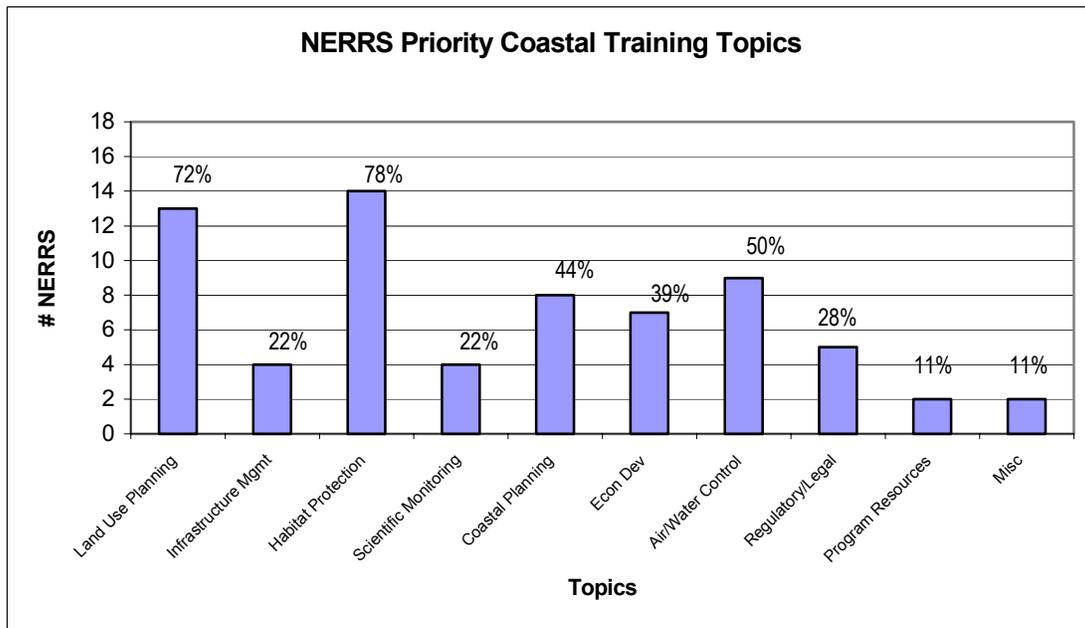


Figure #1

Of the 18 Reserves, the majority (78 percent) identified coastal issues relative to habitat protection as a priority. Coastal issues related to land use planning were also cited as a high priority by the Reserves (72 percent). Additional priority issues among the NERRS were air and water pollution control (50 percent); coastal planning, development, and management (44 percent); and economic development and cultural resources (39 percent). Other issues noted by the Reserves were regulatory enforcement and legal issues (28 percent); infrastructure provision and management (22 percent); scientific monitoring and study (22 percent); and NERRS programs and partners (11 percent). Miscellaneous issues of intergovernmental cooperation, grant writing, and public health were also cited by the Reserves (11 percent). Tables 4, 5, and 6 within Appendix E of this report details the priority coastal issues by Reserve.

When examined individually by NOAA regions, the trends differ somewhat. The NERRS within the Gulf Region identified land use planning and habitat protection and restoration as priority issues. Land use planning and coastal development issues were top priority issues in the Mid-Atlantic Region. In the North East Region, issues of habitat protection and restoration, economic development and cultural resources, and air and water pollution control were priorities. The Pacific Region cited habitat protection and restoration as a top priority. The South East Region indicated that land use planning, infrastructure provision and management, habitat protection and restoration, and air and water

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pollution control were top priorities. See Figure 2 below.

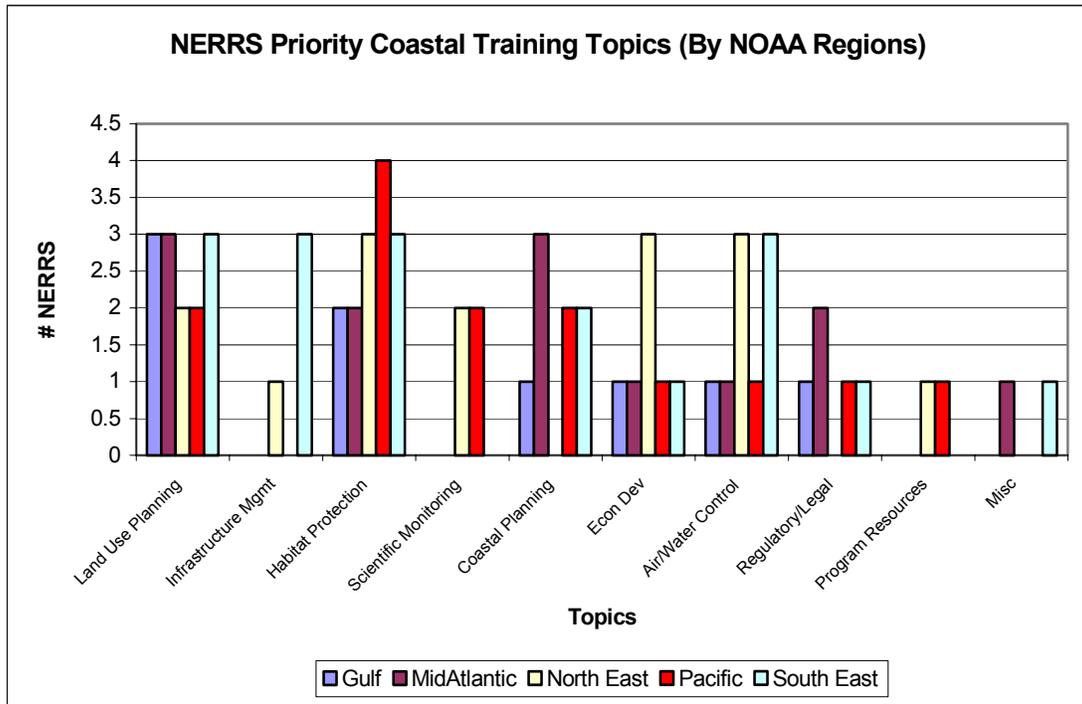


Figure #2

Trends in Program Training Delivery and Formats

The Reserves identified the methods and types of coastal training activities preferred by their audiences during the Market Analysis and Needs Assessment segments of their CTP planning activities. These preferences are included as part of the Marketing and Strategic Plans of the NERRS. The trends in program training methods and formats among the Reserves are discussed in this section.

Given the range of data collected by the Reserves in this area, it was difficult to specifically categorize each training method cited by the NERRS. Therefore, the data regarding program training methods and formats used by the NERRS to conduct their training programs were grouped into 11 categories of similar attributes. The training methods not falling within these categories were included into a miscellaneous category. The categories are:

- Lectures – An explanation of a given subject to an audience, given as part of a course, for a limited period of time
- Web/Online – Connected to a computer network; accessible via computer
- Workshops – A series of meetings emphasizing some type of interaction
- Conferences – A meeting with multiple presenters on a given range of topics
- Seminars – One speaker for a specific presentation given for an allotted period of time
- Courses – Complete body of prescribed studies contributing to a training activity or training sequence; Has one presenter and meets several times. Includes continuing education.
- Field Exercises/Field Trips – An excursion for firsthand examination or observation
- Demonstrations – An illustration or explanation by example or practice application
- Roundtable/Group Discussions – A discussion involving several participants
- Consultations – A meeting where advice is given or views are exchanged

The information and skills that are actually transferred during a training activity is of key importance to decision-maker and policy-maker audiences. Participant satisfaction with program delivery and measurable impacts relative to program objectives are indicators of a successful training program.

Although the Reserves are using multiple modalities for delivery of their CTPs, trends are evident in program delivery and technique. The overall trend among the Reserves for conducting training activities is the use of workshops, where some type of group interaction occurs. Field exercises and trips were a second common mode of training delivery.

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Training across the NERRS is typically delivered in a workshop format (94 percent). Field demonstrations and trips were also indicated by the Reserves (61 percent) as a favored format for training. Lectures (33 percent), conferences (33 percent), courses (33 percent), and demonstrations (33 percent) were additionally noted. Other training delivery methods were web/online (22 percent), seminars (17 percent), roundtable/group discussions (11 percent), and consultations (11 percent). Tables 7, 8, and 9 in Appendix E of this report details the program training methods by Reserve.

The miscellaneous methods as cited by the NERRS were technical training programs, books, coworkers, non-governmental events, professional meetings, short-term trainings, case studies, technical publication series, issue papers, presentations, and interactive videos. Figure 3 illustrates the approaches to training methods conducted by the Reserves.

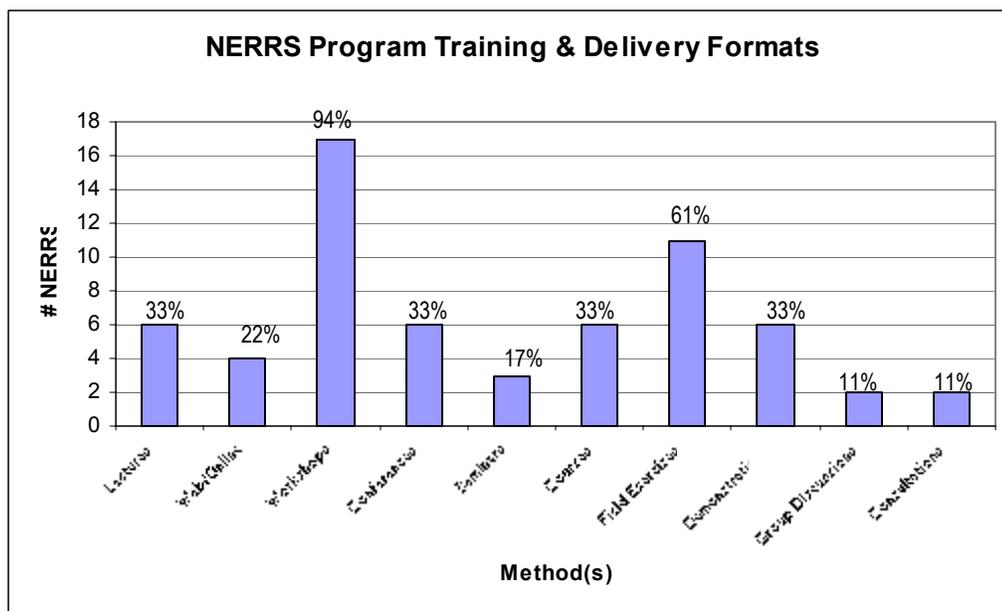


Figure #3

When examined individually by NOAA regions, the NERRS within the Gulf Region indicated that lectures, workshops, field exercises and trips, and demonstrations were equally preferred methods. The NERRS within the Mid-Atlantic Region also favored workshops, with courses and field exercises and trips a second popular format. Workshops and field exercises and trips were cited as preferred delivery modes among the NERRS within the North East Region, with conferences and web and online methods also being used. The Pacific Region's NERRS additionally used workshops, as well as several miscellaneous methods. Conferences, seminars, courses, and field exercises

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and trips were additionally noted. The NERRS within the South East Region cited workshops as preferred for training activities, but also indicated that lectures, conferences, field exercises and trips, and demonstrations were also used. See Figure 4 below.

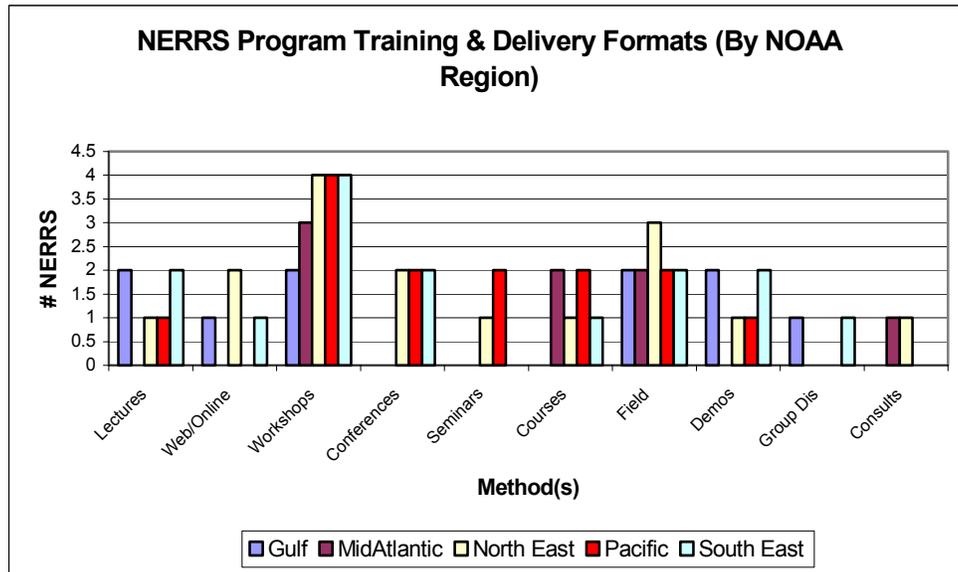


Figure #4

There are opportunities across the NERRS for a collaboration of work as a way to improve training delivery. Multiple NERRS sites worked together to develop various segments of their CTP planning activities. The NERR system can build upon the strength of its unique network by assessing its internal capacity for multi-state and multi-Reserve training opportunities. As evidenced through the NERRS planning documents, several environmental challenges are similar across the Reserves and emerge as priority coastal issues. These priority issues become challenges for policy- and decision-makers, thus illuminating the importance of the flow of information and collective coordination of coastal training activities. These challenges are not new, but are becoming more frequent and complex for policy- and decision-makers. As such, spatially communicating and coordinating training activities across geographies and Reserves will result in an accumulation of knowledge among these policy- and decision-makers that will aid them in addressing these challenges.

Trends Among Target Audiences

The Reserves identified audiences to be targeted for training during the Needs Assessment phases of their CTP planning activities. These audiences were considered by the Reserves as coastal policy- and decision-makers. The Reserves define coastal decision-makers as individuals that make decisions about coastal resources on a regular basis in a professional or volunteer capacity. The focus here is on a subset of regional and local coastal decision-makers that participate in CTPs, rather than all coastal decision-makers. Each Reserve identified key coastal resource issues that fall within the context of NERRS priority issues and the related coastal decision-maker audiences they targeted under this program. Each Reserve is committed to periodically reviewing and adjusting program strategies, issues and audiences as appropriate, to reflect changing needs and issues.

The overall trend among the NERRS when targeting audiences for training was the selection of elected and appointed officials. This is a distinct group because, while they may not have expertise in the coastal/environmental arena, they do implement policy relative to coastal and environmental issues. As such, they have the ability to influence coastal decisions on a tactical basis, one decision at a time, such as a local zoning question or the policies of a planning board. This group includes municipal, county, regional, state, and federal elected and appointed officials, selectmen, councilpersons, managers, and administrator, as well as those elected or appointed to boards and commissions.

Sixty-seven percent of the NERRS targeted elected and appointed officials. Two additional significant targeted audiences among the Reserves were government agencies (44 percent) and planners (44 percent). Government agencies include municipal, county, regional, state, and federal government agency staff such as DNR, U.S. Corps of Engineers, U.S. Coast Guard, U.S. EPA and others. The planners include both elected and appointed planning personnel (private and public), shoreline and watershed planners, and engineers. See Figure 5 below. Tables 10, 11, and 12 in Appendix E of this report detail the targeted audiences by Reserve.

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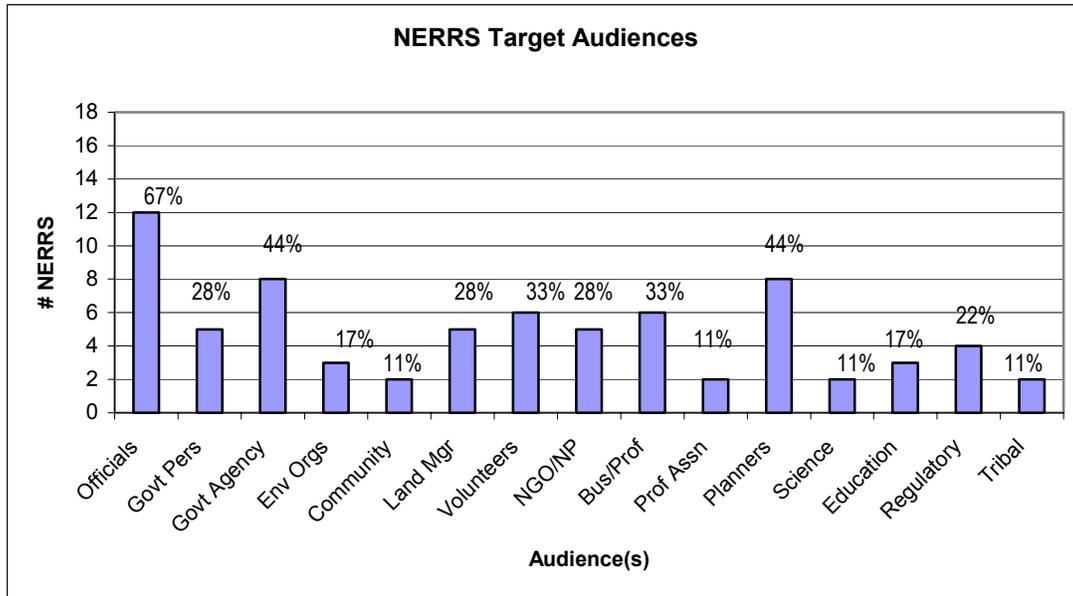


Figure #5

Other targeted audiences indicated by the Reserves include:

- Government personnel – municipal, county, regional, state, and federal government staff, clerks, managers, and administrators (excludes planners)
- Environmental and conservation organizations – watershed councils and other such groups
- Community groups – neighborhood groups
- Land owners and managers – both public and private agencies and organizations
- Volunteers – volunteer organization members, school committees
- Non-governmental agencies and nonprofits – historical societies, historic mansions
- Business and professional – consultants, contractors, visitor services, ecotourism operators, charters, landscapers, real estate professionals, forestry industry representatives
- Business and professional associations – members of business and professional organizations
- Science community – scientists, biologists
- Education community – K-12 educators and teachers, colleges, universities
- Regulatory and enforcement – law enforcement, permit officers, code officials
- Tribal – members of tribal organizations and councils

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When examined by NOAA regions, the common target audiences in the Gulf Region were elected and appointed officials and planners. Within the Mid-Atlantic Region, the common target audience was elected and appointed officials; however, government agencies, volunteers, business/professional, and professional associations were also significantly noted. The common target audience in the North East Region was elected and appointed officials, with land owners and managers and planners also identified as significant. The Pacific Region cited planners as the common target audience, with government agencies, business/professional, science community, regulatory/enforcement, and tribal also significantly noted. Within the South East Region, the common target audience was elected and appointed officials. Government personnel, government agencies, NGOs/NPs, and business/professional were also indicated as significant. See Figure 6 below.

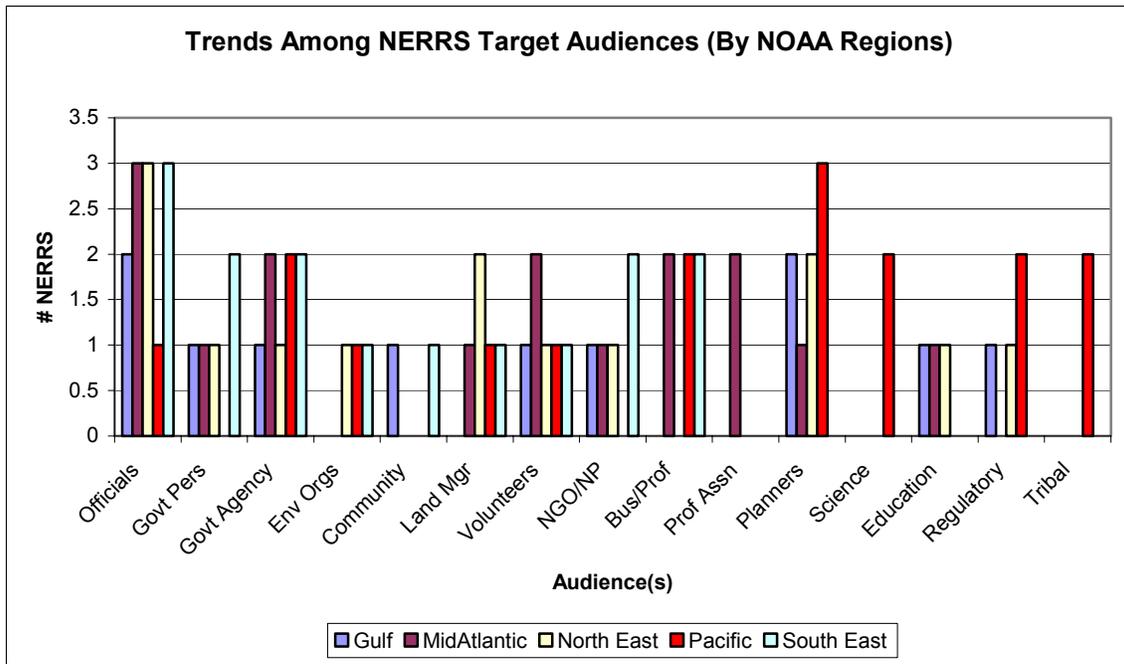


Figure #6

Elected and appointed officials are a particularly challenging audience to target in any environmental training program. Given the high priority ranking of this audience for the CTP, Reserves may need to conduct additional audience assessments to obtain the data they need to develop alternative and creative training delivery strategies that will ensure that they have the information they need to make policy decisions that have far-reaching impacts on coastal resources. It may be critical to develop a triangulated, systematic approach at the Reserve level that targets elected officials and their staff through a range of CTP

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strategies, as well as to educate their constituencies around the same issues through other education and outreach programs in the Reserve.

Methods and formats to deliver training to this group, as well as the content of training activities, may require different modes of information delivery, and even a different type of group interaction. Many elected/appointed officials have inconsistent schedules that are sensitive to the demands of the position and of the general public. Strategies with training formats that are responsive and flexible to the irregular availability of this audience are best suited to serve this group.

Trends in Training Needs as Identified by the NERRS Audiences

A number of specific needs were indicated by the survey and focus group audiences of the NERRS as a result of their Market Analysis and Needs Assessment CTP planning activities. The survey and focus group audiences cited their specific “needs and wants” (what they felt to be necessary) to coastal training activities. These needs and wants include both training needs and preferred methods for receiving training. Given the range of instruments used by the Reserves to collect this data, specific trends were difficult to identify from the CTP planning documents. However, significant generalizations emerged. This section discusses those needs identified by these NERRS audiences.

The NERRS audiences, overall, indicated an interest in building skills and knowledge in specific topical areas. The specific topics cited by these audiences include the priority coastal training issues identified by the Reserves – issues of habitat protection and restoration, land use planning, and air and water pollution control. Additional significant needs cited by the NERRS audiences were with technical assistance and communication technologies, and group interaction and networking opportunities.

The NERRS audiences stated the need to better understand the relationship between their decision-making (processes) and the impact of their decisions on coastal resource issues and problems. These audiences indicated that they wanted to understand both the short- and long-term implications of their decisions. Training activities could be designed to include decision-making outcomes and impacts to the coastal environment. If so, this may present an opportunity for the NERRS to measure changes in policy- and decision-maker attitudes (results of their actions) over time.

The majority (78 percent) of the NERRS indicated that their audiences desired training in specific topical areas. Twenty-eight percent of the Reserves cited technical assistance and communication technologies as a specific training need, while 22 percent stated that their audiences cited the need for group interaction and networking experiences. Other training needs indicated by the NERRS audiences were the need for science based training (17 percent), coordination and collaboration of training activities (17 percent), building professional skills (11 percent), and integrating science into practice (six percent). Eleven percent of the Reserve audiences stated miscellaneous needs, such as a desire for field activities and to integrate training with site based K-12 education. These topics are detailed by Reserve in Tables 13, 14, and 15 of Appendix E.

The Reserve audiences also cited incentives (17 percent) as a preference for training programs. Specific incentives listed by the Reserve audiences include expert and knowledgeable speakers that training should be offered at

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convenient times and at convenient locations, certification, and continuing education credits.

When observed by individual NOAA regions, the audiences within each of the five regions also indicate the need for training in specific topical areas. In fact, there appears to be an even disbursement within each of the five regions across all categories, with the exception of the Pacific and South East Regions. Within the Pacific Region, the need for technical assistance and communication technologies is indicated, and within the South East Region, the need for science based training is cited.

Trends in Partnerships and Collaborations

The Reserves have identified partnerships and alliances that were integral to their CTP planning activities and to the delivery of their education and training programs. These partnerships and alliances are in the form of guidance, strategy, research, training, shared facilities, outreach, staff support, and other resources. This section discusses these partnerships and collaborations.

One of the strengths of the NERRS network is its long-standing partnerships with local, regional, state, and federal entities on a variety of collaborative initiatives. As part of its mission, the Reserves sponsor research activities for scientists and graduate students, educational activities for adult, K-12 and post-secondary audiences, and stewardship activities within communities. Through these activities, the NERRS have nurtured alliances with schools, community colleges, universities, research institutes, nonprofit organizations, state and federal agencies, trade associations, businesses, and a variety of other entities. These alliances are reciprocal in that the expertise of the Reserve staff and scientists is often sought by these same partners for their programs and activities.

These partner relationships are additionally utilized with the Reserves' coastal training programs. The common partners across the Reserves are the core CTP partners, which are Reserve staff, Sea Grant and state coastal management program agency professionals that provided input for the design and administration of the CTP. The core CTP partners are not identified as a trend across the Reserves as the NERRS decided early in the program that local or regional Sea Grant and Coastal Program representatives would be a minimum requisite for membership on Reserve CTP Advisory Committees. Therefore, it is the trend of the NERRS to partner with government agencies in CTP training activities, either through Advisory Group participation or other direct/indirect roles. Other significant partners were higher education institutions and nonprofit organizations. Additional partners included planning and regulatory commissions; local, state, and federal government programs; city and county departments; foundations; businesses and professional associations; and other NERRS. Tables 16, 17, and 18 in Appendix E of this report details the partnerships by Reserve.

All of the Reserves utilized the core partners for CTP activities. Sixty-seven percent of the NERRS partnered with other local, state, and federal government agencies (local, state, and federal government agencies other than those represented through the core partners). Nonprofit organizations (50 percent), and colleges, universities, and other post-secondary institutions (50 percent) were also indicated as significant partners. Additional partnering opportunities were established with planning and regulatory commissions (22 percent); local, state, and federal government programs (22 percent); foundations (11 percent); city

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and county departments (11 percent); businesses and professional associations (11 percent); and fellow NERRS (11 percent). See Figure 9 below.

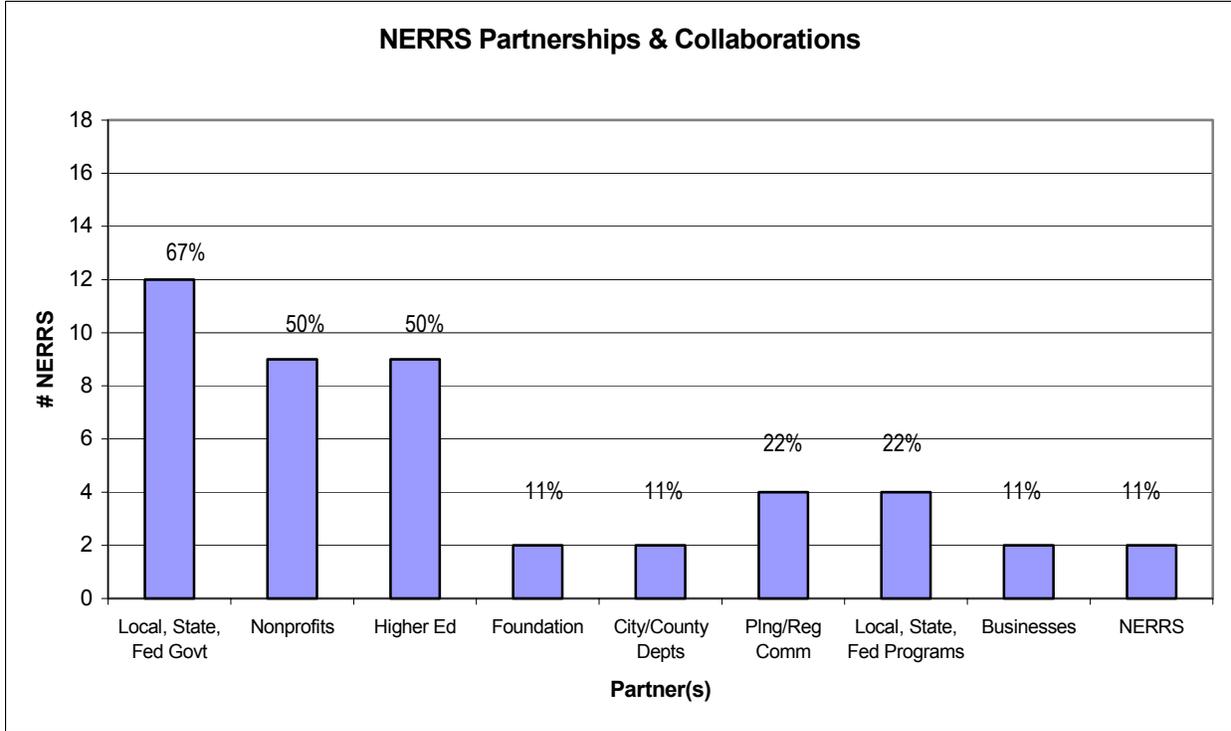


Figure #9

When examined by NOAA regions, the trend within the Gulf Region was partnerships with other local, state, and federal government agencies, nonprofit organizations, and higher education institutions. Within the Mid-Atlantic Region, the common partnerships were other local, state, and federal government agencies, and higher education institutions. The North East Region's common partners were nonprofit organizations and planning and regulatory commissions. Common partners within the Pacific Region were other local, state, and federal government agencies, nonprofit organizations, and local, state, and federal government programs. Within the South East Region, common partners were other local, state, and federal government agencies and higher education institutions. See Figure 10 below.

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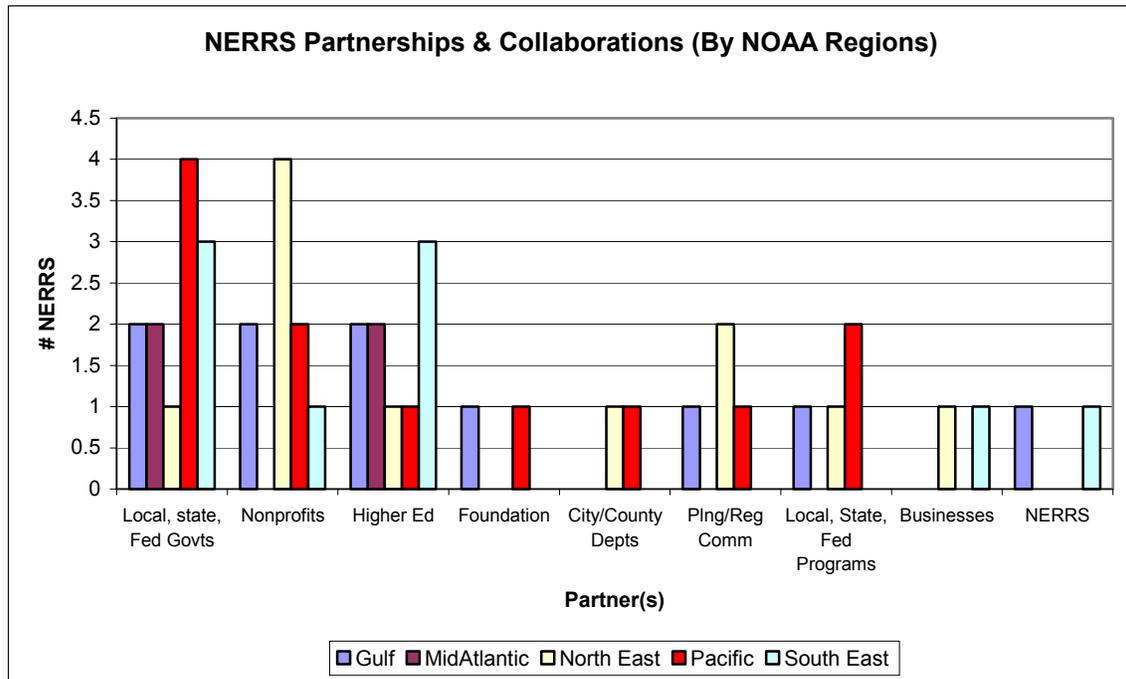


Figure #10

The NERRS partners serve on Reserve advisory boards, and many are immediate partners in regional planning for training and information sharing. The CTP partners and implementers are a small population for each NERR. Restrained funding and staff time across all partner organizations means stretching and sharing resources across a relatively few number of organizations with goals common to the coastal training program.

The Reserves also collaborated within the NERR system on CTP planning activities. North Carolina NERR worked together with North Inlet-Winyah Bay, ACE Basin, and Sapelo Island on the development of its Market Analysis. These Reserves provided input and reviewed the content of a survey template that could be utilized by the four NERRS.

Trends with Regional Training Providers and Regional Training Opportunities

The NERRS have identified a number of valuable resources for providing coastal training to decision- and policy-makers. In many cases, the NERRS are working with or have prior relationships with organizations, groups, agencies, and businesses to deliver this training. The types of entities identified by the Reserves as providers of coastal training activities and the opportunities for regional training venues are discussed in this section.

The trend among the NERRS is that training is primarily offered through the core CTP partners – the Reserve, Sea Grant, and state Coastal Management program agencies (Department of Natural Resources, Department of Environmental Protection, and Coastal Management Program offices). These core CTP partners not only serve as stakeholders in the design and administration of the CTP but as teachers and instructors that share research, experience, and expertise with decision- and policy-makers at all levels. Reserve staff, as part of the NERRS mission, conduct research, and create and expand educational and training opportunities across and beyond Reserve regions on a variety of estuarine related issues. Sea Grant professionals, based at universities in every coastal and Great Lakes state and Puerto Rico, provide science-based research, education, and outreach activities relative to the use and conservation of aquatic resources. State sponsored Coastal Management Program agencies set forth the guidelines that monitor, manage, and protect coastal resources.

In addition to the core CTP partners, significant regional training providers identified by the NERRS were government agencies (state and federal) (78 percent), non-governmental and nonprofit organizations (72 percent), and institutions of higher education (includes community colleges, colleges, and universities) (67 percent). It is significant to note that the same providers offer both training and collaborations with coastal training programs on training needs and audience outreach. Those with knowledge, ability, and resources are already working in the field on a regional basis and are known to the NERRS. Tables 19, 20, and 21 in Appendix E details the regional training providers by Reserve.

Other regional training providers noted by the Reserves were businesses (22 percent), community groups (11 percent), and miscellaneous other entities (22 percent). The miscellaneous regional training providers noted were professional associations, tribal organizations, recreational, environmental and planning organizations, and for-profits (see Figure 11).

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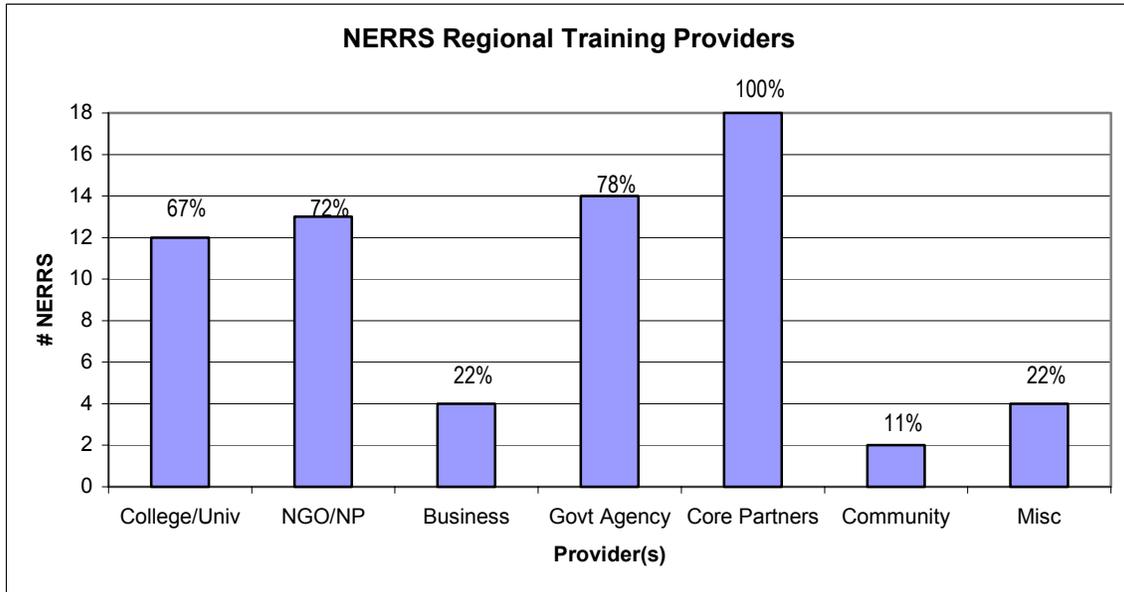


Figure #11

When examined by individual NOAA region, the trends are similar. Within the Gulf Region, the core partners and non-governmental and nonprofit organizations are significant regional training providers. The significant regional training providers in the Mid-Atlantic Region were the core partners and government agencies. The North East Region indicated that the core partners, government agencies, non-governmental and nonprofit organizations, and higher education institutions were all significant regional training providers. Within the Pacific Region, significant regional training providers were the core partners, government agencies, and higher education institutions. The South East Region's significant regional training providers were the core partners and institutions of higher education. See Figure 12 below.

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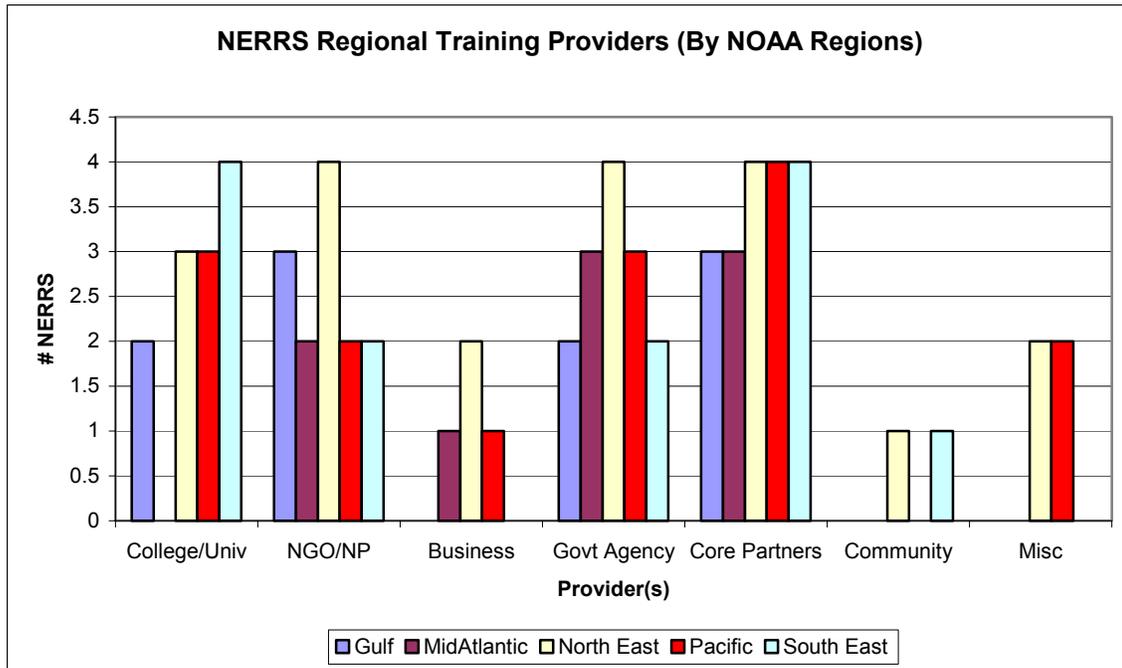


Figure #12

While it might not appear as such, the market is relatively small in known numbers of trainers when considering the territorial expanse of the NERRS and the diversity of audiences in need of training. In other words, the population of professionals in the field (trainers, scientists, CMP managers) is relatively small. The Reserves also face this dilemma. Typically, CTP training at the Reserves is the responsibility of one or two individuals (education specialist, CTP coordinator) for the entire Reserve territory. This territory is typically a multi-county geography, and in the case of Narragansett Bay, is multi-state. The NERRS also indicated their intentions to expand the geographic scope of future CTP activities. Expanding CTP training venues geographically could prove difficult with relatively few Reserve training staff available. Additionally, the Reserve staff needs time to continue to build partnerships.

Program planning and implementation resources for training should be made more accessible to NERRS staff across any given region. As appropriate, training opportunities need to be made available to audiences across a region. Examples of resource sharing among the NERRS, such as collaborating to develop various phases of CTP planning activities, are occurring. These collaborations across the NERRS could be expanded and formalized to share training expertise across Reserve geographies to their various audiences.

Trends in CTP Monitoring and Evaluation Strategies

The Strategic and Marketing Plan segments of the CTP planning activities enabled the Reserves to identify methods by which they could monitor program progress and evaluate the impact of their training programs. The methods identified through these segments are discussed within this section.

Each of the Reserves went through the process of collecting data and information for the Market Analysis and Needs Assessment segments of the CTP planning activities. This data and information was primarily gathered by survey methods during both stages, and supplemented in the Needs Assessment phase with additional methods to synthesize the raw data. External interaction with decision- and policy-makers through focus groups, workshops, and varying telephone interviews were utilized to refine and prioritize training issues and needs. The external feedback and communication combined with the internal processes of the Reserves allowed for a deeper construct of the data and a deeper level of program sophistication.

Effective program monitoring and evaluation strategies tied to well articulated training program (or events or activities) goals and objectives are critical to the continued success of the program. There are a variety of evaluation and monitoring methods being employed by the NERRS to track the progress and measure the impact of their CTPs. The trend identified among the Reserves for evaluating and monitoring the progress of their CTPs involved the use of evaluations and feedback following the conclusion of specific training events.

The NERRS currently employ strategies to monitor or evaluate the progress of their education and training activities. The common techniques used by the majority of the Reserves were evaluations and feedback from the participants at the conclusion of specific training events (67 percent). More than half of the Reserves (56 percent) indicated that some type of survey would be used to evaluate their CTPs. Other methods indicated by the Reserves were systems to track the number, type, and frequency of participants attending each training activity (39 percent); evaluations and studies conducted by consultants or others external to the Reserves (39 percent); and conducting telephone or in-person interviews (39 percent). Tables 22, 23, and 24 in Appendix E details the monitoring and evaluation techniques of the Reserves.

Additional techniques cited were conducting focus groups (33 percent), instituting performance measures (33 percent), web-based or online monitoring methods (22 percent), requests for brochures and other informative mailings (22 percent), media clippings (17 percent), annual or summary reports of progress (17 percent), questions and inquiries from email, telephone, or U.S. mail contacts (11 percent), and discussions with Reserve staff and external partners (six percent). See Figure 13 below.

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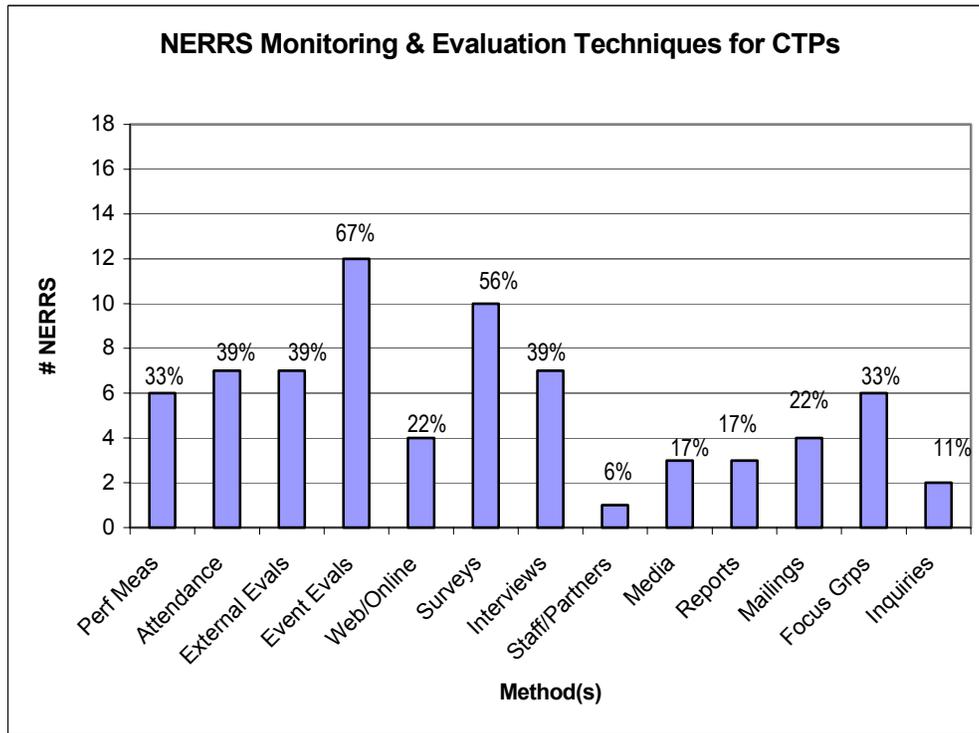


Figure #13

When examined by NOAA regions, the trends within the individual regions slightly differ. The Reserves within the Gulf Region indicated that end-of-session evaluations and feedback were the significant techniques to be used for assessing the progress of their CTPs. Performance measures and evaluations conducted by consultants and others external to the Reserve were also cited as methods by the Gulf Region NERRS.

Multiple methods were cited by the Reserves within the Mid-Atlantic Region. These methods were databases for tracking attendance, web-based and online techniques, surveys, telephone and in-person interviews, brochure and information mailings, and responding to questions and inquiries. Within the North East Region, the Reserves indicated that telephone and in-person interviews were the preferred method; however, evaluations and feedback following specific training events, surveys, and focus groups were also cited.

The Reserves within the Pacific Region indicated that evaluations and feedback from audiences following specific training events would be used, as well as surveys, performance measures, systems to track attendance, telephone and in-person interviews, and focus groups. The significant methods within the Reserves of the South East Region were evaluations conducted by external

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consultants and others. Additional monitoring techniques were attendance tracking systems, evaluations and feedback following specific training events, and surveys. See Figure 14 below.

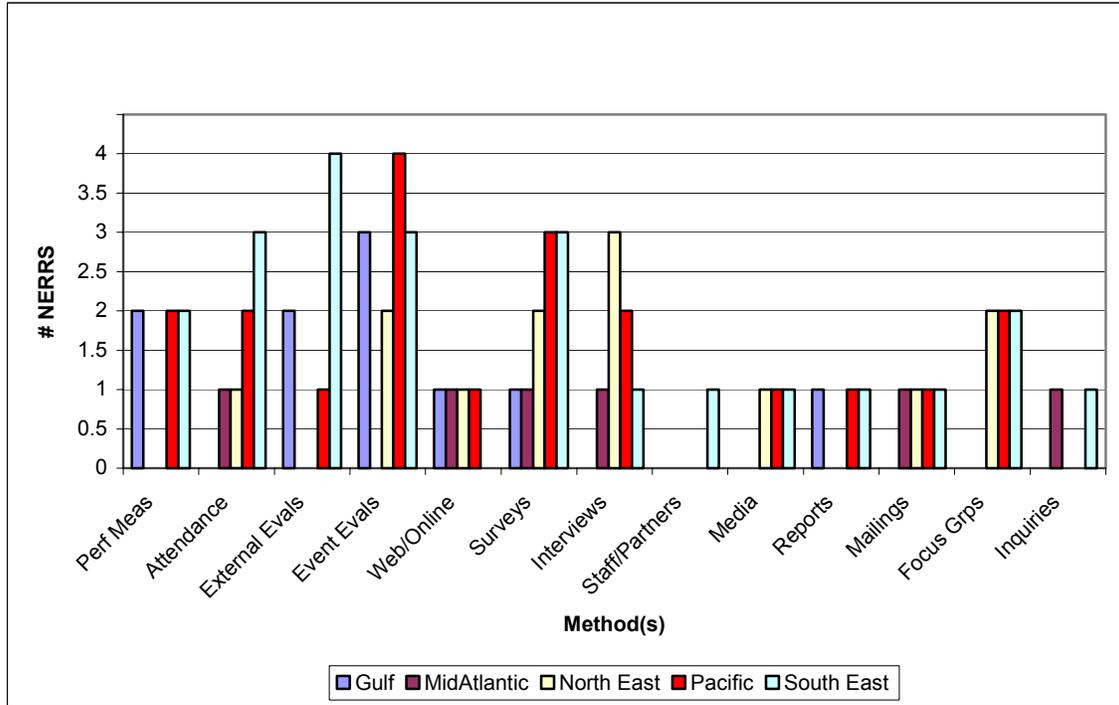


Figure #14

A consistent measurement tool to use across NERRS programming would be useful to capture regional and national trends. As long as the same factors are being measured, the survey instrument itself can be unique to each NERRS coastal training program. The methods currently being employed to track the CTP training characteristics present an opportunity to establish a centralized network for recording, tracking, retrieval, and disbursal of CTP progress across the NERRS. Short- and long-term analyses of these data would reveal trends, as well as opportunities, in the CTP process that could be compared nationally, across Reserve geographies, and by Reserve.

NOAA has developed a performance monitoring manual appropriate to the CTP that is utilized by the Reserves. The manual includes system-wide indicators that could be used to track the progress of the program, sample evaluation questions that link to the indicators to use when surveying audiences, a template for reporting post training activities, and strategies for collecting data. This manual will assist NOAA and the NERRS in measuring programmatic and operational outcomes across the Reserves. Some of these outcomes may be

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generic, but each Reserve should develop indicators as to the outcomes they can expect and want to measure within their service area. These indicators would reflect the different needs of the Reserves for their training focus and delivery, shaped by local conditions.

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Appendices

Appendix A:
Methodologies Employed by the NERRS in Developing CTP Planning Activities

Appendix B:
Template for NERRS Coastal Training Program Document Review

Appendix C:
Telephone Interview Questionnaire: NERRS Coastal Training Program

Appendix D:
Email Letter to NERRS to Conduct Telephone Interview

Appendix E:
Matrices of NERRS Trends

Appendix F:
Project Methodology

Appendix G:
NERRS Coastal Training Program Profiles

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Appendix A:

Methodologies Employed by the NERRS in Developing CTP Planning Activities (Advisory Council, Market Analysis, Needs Assessment, Marketing Plan, Strategic Plan)

I. Trends of Advisory Group/Steering Committee

The majority of the 18 NERRS (83 percent) examined in this analysis completed the five strategic segments and have begun to implement their coastal training programs. Seventy-two percent of the Reserves have hired Coastal Training Program coordinators while other NERRS have utilized existing staff to manage CTP planning activities and/or to develop and enhance education and training venues. Advisory Groups/Steering Committees (hereinafter referred to as Advisory Groups) were formed by 72 percent of the Reserves at the initiation of the CTP planning activities, for the purpose of assisting the CTP coordinators and Reserve staff in the development of the Market Analysis, Needs Assessment, Marketing Plan, and Strategic Planning segments. Twenty-eight percent of the Reserves formed their Advisory Groups during the CTP planning activities, allowing the membership to review the results of the market analysis and needs assessment, or for the purpose of providing guidance for the strategy segments. Regardless of the timing of the entry of the Advisory Groups into CTP planning activities, the groups (overall) serve in an advisory capacity to the CTP coordinator and the Reserve. In all instances, the Reserve has final decision-making authority and establishes policy for the CTP.

The membership of the Advisory Groups varies. The number of members across the 18 NERRS ranges from three to 16 individuals, with membership participation requested by the Reserve for a minimum of one year. Meetings are held as frequently as monthly and as infrequently as once per year, yet the Reserves continually communicate with Advisory Group members throughout the year.

Comprising the memberships of these Advisory Groups are primarily the NERRS core partners (Sea Grant, state coastal management program state/federal agencies) and Reserve staff. Larger Advisory Groups include membership from nonprofits, coastal decision-makers, environmental specialists, higher education, health departments, realtor associations, and planning commissions. Advisory Group memberships for two Reserves are being coordinated on a larger scale. Ace Basin and North Inlet-Winyah Bay have collaborated to form a regional Coordinating Committee to oversee CTP development across a broader geographic scope. The Sea Grant, state Coastal

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Management Program, and Reserve partners comprise the committee, which is chaired by a South Carolina NERR staff member annually on a rotational basis. Ace Basin has also formed a smaller Steering Committee that offers guidance and assistance on daily training activities at the Reserve level. Ace Basin and North Inlet-Winyah Bay indicate that the Coordinating Committee may be expanded in the future to include the North Carolina and Georgia NERRS.

Although the roles of these Advisory Groups have primarily been that of an advisory capacity, several Advisory Groups have contributed insight, direction, review, and expertise throughout the segments of the CTP planning activities. In one instance, the Jacques Cousteau NERR utilized its Advisory Group to help establish the framework for the development of its CTP. The Reserve surveyed its Advisory Group members on the importance of issues to current and future programming, and these responses were used to design the Market Analysis and Needs Assessment segments of their CTP planning activities. Wells Bay formed its Advisory Group during the development of its Market Analysis and Needs Assessment segments; thus, its members were able to evaluate the results and help to align policy. Padilla Bay's Advisory Group created subcommittees to address specific outcomes of its CTP planning activities. Subcommittees to address website development, training topics, and implementation of the CTP Marketing Plan are outgrowths of its Advisory Group efforts.

There are two instances where the original composition and purpose of the Advisory Group was altered by the Reserve. Kachemak Bay first created an interim committee, comprised of members with a statewide perspective, to serve as a "think tank" in providing input and guidance on CTP mission, objectives, and design. The Reserve later refined the membership of its Advisory Group to a more regional perspective, to better assist the Reserve in implementing the segments of its CTP. Narragansett Bay also restructured its original Advisory Group to include representatives of organizations providing training to the Reserve's target audiences. The Reserve may reorganize its Advisory Group every three years as it reassesses its audiences and training priorities. A snapshot of the composition of the Reserves' Advisory Groups is outlined in the table below.

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Table 1

NERRS ADVISORY GROUPS						
Reserve	#	Term	Voting	Meetings	Representation	Role/Purpose
Ace Basin-SC		Min one			leaders	istance vities
DE		N/A	N/A	N/A	N/A	N/A
Elkhorn Slough-CA	9	Min one year	Consensus; majority	1-2 times per year	Core partners, Reserve staff, conservation district, planning, environmental	Advice on phases; evaluation of CTP
Hudson River-NY	7	Min one year	Consensus; majority	4 times per year	Core partners, Reserve staff, conservation, coastal specialists	Advisory, consultant selection, partnerships, evaluation
Jacques Cousteau-NJ	13	Min one year	N/A	1-2 times per year	CZM, higher ed, BPNEP, health dept, planning, park service	Reviews MA, NA results, projects, advice, partnerships, evaluation
Jobos Bay-PR	8	Min one year	Consensus; majority	As needed	Core partners, Reserve	Advisory, make recommendations
Kachemak Bay-AK		Min one year	majority		Core partners, Reserve, planning	Advisory, review documents, partnerships, evaluation
Narragansett Bay-RI	N/A	Min 3 years	Consensus; majority	Once per year	Reps of orgs providing training, core partners, Reserve	Review documents, advisory
North Carolina-NC	14	Min one year	Consensus; majority	Once per year	Core partners, Reserve, planner, legislator, CRM decision-maker	Advisory, make recommendations, partnerships, evaluation
North Inlet-Winyah Bay-SC	5	Min one year	Consensus; majority	Twice per year	Core partners, Reserves	Planning & sponsorship of training, input into CTP development, review documents
Old Woman Creek-OH	N/A	N/A	N/A	N/A	N/A	N/A
Padilla Bay-WA	7	Min one year	Consensus; majority	As needed	Core partners, Reserve	Recommendations on MA & NA review and development
Rookery Bay-FL	12	Min one year	Consensus; majority	Twice per year	Core partners, Reserve, nonprofit, higher ed, legislative aid, realtor, SWCD	Advisory, input on new target audiences, issues, partnerships, planning, CTP evaluation

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NERRS ADVISORY GROUPS (continued)						
Reserve	#	Term	Voting	Meetings	Representation	Role/Purpose
Sapelo Island-GA	5	Min one year	Consensus; majority	Once per year	Core partners, Reserve	Advisory, makes recommendations, reviews documents
South Slough-OR	16	one year	Consensus; majority		Core partners, Reserve, higher ed, state/federal agency, nonprofit	training topics, target audiences, partnerships, CTP
Waquoit Bay-MA	3	one year	Consensus; majority	times per year	Reserve	Advisory, contract review, conducts planning activities
Weeks Bay-	10	Min one year	Consensus;	N/A	Reserve, higher ed, state/federal agency	Guidance, input on partnerships
Wells-ME	4	Min one year	Consensus; majority	Quarterly	Reserve	Oversight, guidance, partnerships

II. Trends of Reserve Market Analysis, Needs Assessment, Marketing Plan, Strategic Plan

The Market Analysis segment provided each of the NERRS with a sense of available coastal training opportunities and partnerships within its geographic market area. The Needs Assessment segment allowed the NERRS to capitalize on its market study by having training providers and coastal decision-makers identify and prioritize the training opportunities most pertinent to their professions. The information from both phases was used to develop the framework and align strategies for each NERRS coastal training program. The strategies and marketing methods were developed through the development of the Marketing Plan and Strategic Plan segments of the CTP planning activities. Various aspects of these strategic elements – the Market Analysis, Needs Assessment, Marketing Plan, and Strategic Plan segments – are examined in this section of the report, beginning with the methodological approaches utilized by each Reserve to conduct its Market Analysis and Needs Assessment segments.

A. Methodologies for Market Analysis and Needs Assessment (by Reserve)

The Reserves employed a variety of approaches to collecting data and information through the Market Analysis and Needs Assessments segments of the CTP planning activities. In summary, the Reserves utilized some type of survey questionnaire format to conduct their analyses. This was particularly true in the Market Analysis segment. While 88 percent of the Reserves also used a survey questionnaire for the Needs Assessment there tended to be more variation in the techniques for this segment (see table 2 below). Focus groups, the nominal group technique, interviews, and workshops were commonly used methods.

The Reserves recognize the importance of bolstering the response rate. This was evident not only in the specific wording within the final reports, but also in their use of follow-up communication and/or telephone calls to participants. Also, 39 percent of the Reserves employed the use of recent technological software packages or online survey techniques. Many were able to either post their surveys on an organizational website, or email an information document which contained a link to the survey for the respondents to follow. However, this did not preclude the use of traditional mail questionnaires.

The Reserves mostly formulated a sense of which organizations are training providers and potential respondents to their surveys through data mining and Internet searches. Many composed CTP committees that were knowledgeable in identifying these groups. A smaller proportion employed several different techniques in unison to ensure an accurate representation of plausible responses within the market.

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Table 2

METHODOLOGIES USED BY THE NERRS TO CONDUCT MARKET ANALYSIS & NEEDS ASSESSMENT PHASES		
Reserve	Market Analysis Approaches	Needs Assessment Approaches
ACE Basin - SC	Survey questionnaire, with training providers first being contacted by telephone and asked to participate in the survey, which was then sent to them as an email attachment	Survey developed and modeled after the survey used by the Waquoit Bay NERR; administered by U.S. mail
Delaware - DE	Survey questionnaire with respondents being given the choice of completing it by telephone, email, or a mailed hard copy version that could be faxed or emailed back to the contractor	Survey questionnaire that was jointly developed by the contractor and the Reserve; administered by the telephone
Elkhorn Slough - CA	Survey questionnaire by email	Survey was developed by the Elkhorn Slough staff based largely upon the formats of Needs Assessment instruments previously approved of by NERRs, with additional questions specific to the Elkhorn Slough geographic region
Hudson River - NY	Online survey questionnaire; administered Conducted in-house, but the report was written by an external contractor	Two full day workshops of a cross section of discussions, idea generation, voting, and a
Jacques Cousteau-Mullica River - NJ	Survey questionnaire conducted by email, mail, and/or telephone	Survey questionnaire administered via email, mail and/or telephone
Jobos Bay - PR	Interviews, focus groups, data mining on the Internet, and a survey	In-depth interviews with experts, focus groups with coastal decision makers, a mail survey, and a survey of the educational needs of the surrounding community
Kachemak Bay - AK	Website survey with email address and link being emailed to prospective respondents	Developed a two-tiered approach that analyzed “umbrella” issues and specific “identification” issues. Used a mixture of focus groups (open panel discussions), the nominal group technique (NGT), personal interviews, and questionnaires (on-line and pencil).
Narragansett Bay - RI	Online survey using Survey Monkey; a small number were also mailed	Mail surveys and online survey with Survey Monkey used to analyze the findings
North Carolina - NC	Online survey as email attachment, with telephone interviews	Focus groups and a written survey
North Inlet-Winyah Bay - SC	Online survey developed in collaboration with by telephone to invite participation, and then were sent the survey as an email attachment	Mail survey used
Old Woman Creek - OH		drawn from 34 coastal and watershed counties

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METHODOLOGIES USED BY THE NERRS TO CONDUCT MARKET ANALYSIS & NEEDS ASSESSMENT PHASES (continued)		
Reserve	Market Analysis Approaches	Needs Assessment Approaches
Padilla Bay - WA	An initial list of survey recipients was provided contacted to participate in an online survey; The market analysis was conducted in-house, and Survey Monkey was used for the data analysis	Names were collected from the CTP Advisory electronic survey. The needs assessment was also conducted in-house, and the data were analyzed with Survey Monkey
Rookery Bay - FL	conversations/interviews; group of 8 planning practitioners also either mailed or faxed the survey	Conducted in two parts: an overall needs assessment and a subsequent assessment of southwest Florida planners; utilized a survey & focus group
Sapelo Island - GA	The University of Georgia Survey Research Center assisted in the compilation and interpretation of data	Georgia Survey Research Center
South Slough - OR	Potential respondents contacted by telephone for an interview; email surveys sent to a during which surveys were administered	Mail survey, telephone interviews
Waquoit Bay – MA	written survey, and a focus group of training providers	Survey questionnaire; telephone interviews
Weeks Bay – AL	Mail survey	Mail survey
Wells – ME	Conducted partially in-house, and partially by ended questions were chosen as the primary data collection strategy	Two approaches were used, with the first that was mailed to coastal decision-makers in southern Maine

ACE Basin NERR

Market Analysis

For the Market Analysis segment, the staffs at the ACE Basin and North Inlet-Winyah Bay NERRs collaborated to design a written electronic survey of coastal decision-maker training providers in South Carolina. The Reserve manager from ACE Basin indicated a desire to hire a consultant to conduct both the Market Analysis and Needs Assessment segments, but expressed concern regarding an “acceptance factor” in relating with local constituents. The manager stressed that an external consultant selected for this work would have to be local to the area and familiar with the communities within the Reserve’s region. For studies of this nature, there is the perception that at least among locals (particularly within the smaller rural communities), outsiders may not generate the same level of cooperation that a more local contact may receive.

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The contact list of potential training providers was developed based upon recommendations from the CTP Coordinating Committee, past coastal decision-maker workshop partners and attendees, and independent research conducted by staff members of both Reserves. This process identified a total of 32 potential training providers. For those who agreed to participate, the survey was then sent as an email attachment. The survey was three pages in length, and contained seven closed-ended questions and four open-ended questions. Approximate time to complete the survey was estimated to be 30 minutes. The findings from the Market Analysis study are based on 17 respondents who completed the survey *and* provided the type of coastal decision-maker training described within the survey.

Needs Assessment

The Needs Assessment was also conducted as a collaborative effort between the ACE Basin NERR and the North Inlet-Winyah Bay NERR. The Needs Assessment survey was modeled after the survey developed by the Waquoit Bay NERR. The objective of this segment was to conduct an assessment of the training needs of individuals or agency/organizational representatives who make decisions associated with the ACE Basin watersheds, estuaries, or coastal resources. The Needs Assessment survey was sent to approximately 100 community leaders via U.S. mail. A total of 35 surveys were returned, and responses were tabulated in a Microsoft Access database file. The results of the Needs Assessment survey assisted the ACE Basin CTP coordinator in developing a training program directed at those who make resource decisions, and also in identifying the watershed, coastal, and environmental resource issues of importance to the natural resource managers.

Delaware NERR

Market Analysis

The Market Analysis segment for the Delaware NERR was completed in 2002 and was conducted by an external contractor. A list of 47 coastal training providers was developed using provider listings supplied by the Reserve, and independent research conducted by the contractor. Of the 47 training providers identified, 45 were based in Delaware, while two were based out-of-state. Several of the identified training providers also had “sub-providers” of training. Respondents were given the choice of completing the survey by telephone, email, or a mailed hard copy version that could be faxed or emailed back to the contractor. None of the participants elected to complete the survey over the telephone. The Market Analysis report findings are based on the responses of 33 coastal training providers.

Needs Assessment

The Reserve's Needs Assessment was completed in 2003. An external contractor, utilizing a survey questionnaire that was jointly developed by the contractor and the Reserve, also conducted this study. The survey questionnaire was administered over the telephone, and a total of 214 completed interviews were obtained.

Elkhorn Slough NERR

Market Analysis

The Elkhorn Slough NERR completed its Market Analysis in 2002. Prior to completion, the Reserve's Advisory Committee met extensively to discuss the methodology to be used in the analysis. An external contractor was utilized to conduct this phase. The Reserve's CTP coordinator said that an "in-house" approach would perhaps have been more useful, and that any future market analyses by the Reserve would be conducted in-house.

The final report for the Market Analysis study analyzed data from 33 respondents who met the criteria of providing training and/or education to coastal management professionals in the Monterey Bay area. The training providers participating in the survey were asked to respond to questions addressing the following areas:

- Audiences whom the respondents' organizations had trained in the past two years;
- Topics on which respondents' organizations had offered training;
- Respondents' perceptions of various groups;
- Needs for additional training and education;
- Perceptions of the need for additional training and education on specific topics;
- Perceptions of the effectiveness of various training methods;
- Perceptions of the effectiveness of marketing tools;
- Additional non-training professional resources offered, such as reference materials or website assistance; and
- Interest in possible types of support that could be offered by the CTP.

Needs Assessment

Members of the Elkhorn Slough staff conducted the Needs Assessment segment of the CTP planning activities. The Needs Assessment study focused on planners and regulators – a principle audience identified in the Market Analysis. The Elkhorn Slough staff developed the survey questionnaire for the Needs Assessment, based largely upon the formats of Needs Assessment

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instruments previously approved by NERRS, with additional questions specific to the Elkhorn Slough geographic region. The survey was amended following review by Elkhorn Slough staff and volunteers for format and length. In May 2003, an email request to participate in the survey was sent to 10 planning and enforcement groups located in Santa Cruz and Monterey counties, along with a web link directing respondents to the survey.

A total of 40 respondents took part in the Needs Assessment survey. Most responses were from the Monterey and Santa Cruz planning offices, while several responses also came from the California Coastal Commission. Specific areas addressed by the survey included occupational focus of respondents, barriers to attending educational forums, education level of respondents pertaining to areas of biology, ecology, or resource conservation, comfort level with ecological subjects, preferred design of educational programs, prioritization of specific training subjects, and other training specifics such as preferred times, location, and potential incentives to attend training.

Hudson River NERR

Market Analysis

The market analysis data collection process was conducted in-house, but an external consultant was utilized to analyze the findings and generate the report. The CTP staff at the Hudson River NERR developed the Market Analysis questionnaire for the survey of training providers. The survey was composed of 54 questions concerning the organizations and the training provided. The questions specifically addressed background information, training topics and issues, specific training forums/courses, audiences, training over the next several years, program marketing, and public, student and teacher programs.

The geographic scope of the survey included 10 counties along the Hudson River Estuary. The survey was administered online beginning in late April 2003 using an online survey tool to create and publish custom surveys entitled SurveyMonkey.com. This is an online subscription service from which one can design a survey, collect responses, tabulate results, and (with the paid monthly fee) download the data to your computer. The analysis of the data (the identification of trends, commonalities, impacts, gaps, opportunities) is not available through SurveyMonkey.com. The survey remained open until mid-August, since a cascade effect was used, whereby earlier respondents were asked to suggest other individuals or organizations that could respond. The Reserve distributed approximately 130 surveys and received a 72 percent response rate. Respondents were contacted by telephone or email and asked to complete the survey. A link directing respondents to the online survey was embedded in the correspondence. Paper surveys were sent to those by request.

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The results were tabulated through the use of Survey Monkey and Excel. Frequency distributions were used to show tendencies in the data.

Needs Assessment

The Needs Assessment targeted Hudson River Estuary land managers. This group included scientific, natural resource, administrative and operational staff and volunteers of land trusts, nonprofit organizations, colleges, environmental organizations, and public land managers at the local, county, state, and federal levels. The Reserve conducted two full-day workshops on November 12 and 14, 2003, with a cross-section of 21 participants in each session. The workshops utilized small group discussions, idea generation, voting, and a short survey. The primary topics of the workshops included challenges facing managers, examining skills and knowledge needed to manage land, identifying needed training topics, prioritizing training needs, and detailing the logistics of training delivery. Written responses were collected from 36 participants.

Jacques Cousteau – Mullica River NERR

Market Analysis

The Jacques Cousteau-Mullica River NERR completed its Market Analysis segment in 2003. In the opinion of the Reserve's watershed coordinator, the focus of the market analysis was too broad, and the findings would have been more useful if the study had been conducted using a narrower and more specific approach. An inventory of coastal training providers was developed using information gathered from independent research conducted by an external contractor. An extensive Internet search was conducted to identify potential coastal training providers, and to gather background information about the providers before they were contacted. This process resulted in the identification of 140 individual New Jersey based coastal training providers. The survey instrument featured approximately 290 questions. Surveys were conducted by email, U.S. mail, or in the case of one respondent, by telephone. Findings from the Market Analysis report are based on data provided from a total of 48 respondents. State agencies and non-profit organizations represented the majority of those responding to the survey.

After some respondents were initially contacted, the Reserve felt it necessary to include a clarification of the term "coastal," due to the fact that some respondents were thinking that this subject was, in essence, limited to topics like beach erosion or coastal development. A broader definition would include other issues such as water quality and habitat protection. In addition, a low response rate was obtained for several questions, in particular those that asked

respondents to rate the need for more or less training in certain areas, or to identify audiences that potentially needed more training.

Needs Assessment

The same external contractor was utilized for the Needs Assessment segment. Similar to the Market Analysis, the Reserve's watershed coordinator assessed the focus of the Needs Assessment as being too broad. The survey instrument utilized in the Needs Assessment segment contained approximately 200 questions for respondents. Based upon research and information gathered by the contractor, 600 potential coastal decision-makers were identified from the state legislature, local governments, volunteer organizations, business organizations, state agencies and professional associations, and K-12 educational institutions. State legislators were later eliminated from the survey because of their policy not to participate in surveys. Ultimately, a total of 206 completed surveys were obtained via email, U.S. mail or telephone.

Jobs Bay NERR

Market Analysis

Jobs Bay NERR used interviews, focus groups, data mining on the Internet, and a survey of training service providers identified by Reserve staff to identify providers of training services and key thematic areas covered by providers. The in-depth interviews with 20 experts of coastal and marine affairs, scientists, and university staff members identified critical information on course design and target audiences. One focus group involved coastal decision-makers from federal agencies. For this audience, the Reserve designed a 26-question format to analyze coastal training in Puerto Rico. The questionnaire included background information, provider training background/credentials, capacity building, the frequency and times of courses, and program strengths and weaknesses. The questions were then administered during a one-hour focus group session on April 19, 2002. Reserve staff also conducted an inventory of programs and activities. An electronic mail survey was completed by 41 percent (n=66) of the 161 coastal decision-makers online using a professional survey program, with 68 percent identifying themselves as training providers. The results were analyzed with descriptive statistics and tables/figures.

Needs Assessment

The Needs Assessment segment also employed a mixture of methodologies. First, in depth interviews with 20 environmental experts were convened to assess current and future needs. Second, focus groups were conducted with coastal decision-makers throughout the area, with 33

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participating. Third, a mail survey was sent to professionals in the municipalities of the region. A total of 113 people were identified and 22 responded, for a 13 percent response rate. Finally, a survey of the educational needs of the surrounding community was conducted, and a response rate of 70 percent (42 out of 60) was generated from this effort.

Kachemak Bay NERR

Market Analysis

Kachemak Bay first began its CTP planning activities by forming a seven-member CTP committee in mid-2001. The CTP Steering Committee assisted in the development of the Market Analysis survey. The survey examined various issues such as background information/mission, target audiences, training topics, details on training and workshop events, information and outreach efforts, and partnerships. The survey was designed as an electronic website survey and consisted of 23 closed-ended and four open-ended questions (27 total). The Internet address was emailed to prospective respondents. A few select surveys were faxed or emailed, and later completed as a 15-minute telephone survey. The CTP Steering Committee generated the list of possible respondents, while a section at the end of the survey asked respondents for recommendations of additional survey candidates. Surveys were received from respondents from 142 organizations, with 130 being separate programs, for a 73 percent response rate.

Needs Assessment

The Needs Assessment was conducted using a mixture of focus groups (open panel discussions) and the nominal group technique (reduces the influence of powerful personalities in the group and generates an impartial group forum). Both utilized a facilitator. Three categories were targeted – water taxi and boat tours, wilderness lodge/bed and breakfast, and charter boat fishing guides. The sessions were four hours in length, and responses were recorded on flip charts. The data were analyzed using descriptive statistics.

Narragansett Bay NERR

Market Analysis

The Narragansett Bay NERR developed a database of 257 training, education, and outreach institutions using information from existing databases of the Reserve and Rhode Island Sea Grant at the University of Rhode Island Coastal Resources Center (RISG/CRC). The Reserve also requested names of possible training institutions from other prominent trainers and educators including EPA staff, Rhode Island Rivers Council, Grow Smart Rhode Island, and

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the Massachusetts Watershed Initiative. Because 60 percent of Narragansett Bay and its watershed is located in Massachusetts, the geographic scope of the Market Analysis included training providers in both Rhode Island and Massachusetts located within the Narragansett Bay watershed.

The Reserve's project team identified questions to be answered by institutions to help identify potential partners for the CTP and to have a better understanding of the topics and audiences already being targeted. The project team was comprised of staff from the Reserve, the RISG/CRC, and the U.S. EPA Region 1 (the partners for the CTP). The team also reviewed other NERRS market analysis surveys and asked other NERR CTP staff for input as to the most effective means to complete this task. After discussing its effectiveness with both the Kachemak Bay and Padilla Bay NERRS staff, the project team decided to use the online software program Survey Monkey and developed a 32-question survey format. Once the survey was designed, the project team submitted five pre-surveys to test the length and the question content. Revisions were made based on these responses.

In October 2002, 229 surveys were electronically sent and 28 were mailed with letters of explanation to training, education, and outreach institutions in Rhode Island, Massachusetts and Connecticut. The project team contacted institutions in the Grow Smart Rhode Island municipal training coalition, as well as institutions representing professional organizations, to ensure their involvement in the study. Emails were sent as reminders to submit completed surveys, as well as follow-up telephone calls to remind providers to return the surveys. In order to encourage a high response rate, those who returned a completed survey were entered into a drawing for prizes including an overnight stay at the Rose Island Lighthouse, an evening cruise on Narragansett Bay (15 winners received two tickets), guided field tours on Prudence Island, and gift certificates for admission and the gift store at the Audubon Environmental Center in Bristol, RI.

The survey was closed on November 1, 2002 with a total of 86 surveys (34 percent response rate) received. A small percentage (22 percent) of the respondents mailed in their completed survey, while 78 percent used the Survey Monkey online tool. The project team excluded eight of these surveys in the analysis primarily because only the first page of the survey had been completed and/or duplicate surveys were submitted.

Needs Assessment

The target audience for the Reserve's Needs Assessment was municipal volunteers and staff. Because 60 percent of Narragansett Bay and its watershed is located in Massachusetts, the Reserve's project team focused an initial Needs

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Assessment on municipal volunteers and staff in all 39 Rhode Island municipalities and 42 Massachusetts communities located within the Narragansett Bay watershed.

A database of 1,148 municipal volunteers (700 from Rhode Island and 448 from Massachusetts), including 211 key staff (120 from Rhode Island and 91 from Massachusetts) was developed using information from the existing Rhode Island Sea Grant database, the Audubon Society of Rhode Island, municipal web sites, and listings provided by town or city clerks. Because the survey was implemented during municipal elections, the project team made a special effort to update the database to include the newly appointed volunteers.

The project team identified questions to be answered by municipal volunteers and staff. The team then asked other institutions if they had any questions about issues they would like incorporated into the survey that were not necessarily a priority for the CTP. As an example, many wanted to know if there was an interest by municipal volunteers and staff on the topic of affordable housing. These were incorporated for the benefit of these institutions.

Once these questions were identified, the project team reviewed other Narragansett Bay NERR Needs Assessment surveys, as well as a Needs Assessment survey for Rhode Island municipal volunteers that had been successfully implemented in 2000 by the University of Rhode Island Cooperative Extension and Grow Smart Rhode Island. Based on this information, the project team developed a 10-question, four-page paper survey to gain information on preferred topics and issues, and training format and delivery. The project team pre-tested the survey by submitting five surveys (two paper and three Internet) to Massachusetts (two) and Rhode Island (three) residents. Revisions were made based on responses.

The surveys were mailed in November 2002 to municipal volunteers and staff in the 39 Rhode Island and the 42 Massachusetts municipalities within the Narragansett Bay watershed. Once elections were finalized, surveys were mailed to the newly appointed volunteers. A total of 1,148 surveys were mailed – 448 to Massachusetts and 700 to Rhode Island. The survey was sent via U.S. mail with a letter of explanation, the four-page survey, and a business reply self-addressed stamped envelope. The survey was then modified for the web-based survey tool, Survey Monkey, and made available on the Rhode Island Sea Grant web page. The project team emailed the survey to 87 volunteers and staff members as a reminder to either participate in the survey online or to remit by U.S. mail. The project staff also randomly telephoned approximately 200 individuals to encourage them to return the survey. Supporting organizations, including the Rhode Island Association of Conservation Commissions and the Massachusetts Association of Conservation Commissions, also sent emails to their members asking them to complete and return the surveys. The survey was also advertised

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in the Rhode Island Statewide Planning email newsletter, with a direct link to the survey through the Rhode Island Sea Grant web page.

To encourage a high response rate, those who returned a completed survey were entered into a drawing for prizes, including an evening cruise on Narragansett Bay (15 winners received two tickets), guided field tours on Prudence Island, and gift certificates for admission and to the gift store at the Audubon Environmental Center in Bristol, RI.

The survey was closed on January 15, 2003, with a total of 205 completed surveys (19 percent response rate) – 144 from Rhode Island, 54 from Massachusetts, and seven unknown. Of those who responded, nearly 20 percent (40) utilized the web-based survey, while the remaining 165 were either returned by U.S. mail or fax.

North Carolina NERR

Market Analysis

An electronic survey was employed for the North Carolina NERR Market Analysis. The Reserve emailed 60 recipients with a survey attachment to be completed via telephone interviews, but many respondents simply returned the survey via email already completed. It is unclear as to what response was gathered over the telephone versus who responded only by email. The overall response rate was 55 percent. There is no breakdown of how many respondents were training providers and how many were participants in other training, although the narrative findings indicate that 36 percent of respondents offer training on coastal management issues, and they provide the basis for the topics identified in the analysis. Training topics were identified, as well as new or additional partnerships. Pie charts and tables were used to present data findings, and a matrix of findings from the Market Analysis was created to depict findings of issues across agency geographies.

Needs Assessment

The North Carolina NERR utilized both focus groups and a written survey to conduct its Needs Assessment. Four focus groups of planners were held, one for each of four coastal planning districts identified, based upon the large geographic spread of the Reserve's market area.

Using initial information gathered on training needs for [coastal] land use planning from the focus groups, a survey was developed and sent to 144 coastal planners to further identify and prioritize issues and services needed. A total of 65 responses were received (45 percent response rate) via mail, fax, or web-page completion. Descriptive statistics were utilized for the report. Charts and

tables providing results of focus group discussions were provided, and identified the primary and secondary rankings of topics by participants as well as survey respondents.

North Inlet-Winyah Bay NERR

Market Analysis

North Inlet-Winyah Bay collaborated with the ACE Basin NERR in developing an electronic survey of coastal training providers in South Carolina for its Market Analysis. The purpose of the survey was to gather specific information about the focus and methods of current CTP providers.

Thirty-two potential providers were identified through recommendations provided by the NERRS CTP Coordinating Committee, past training attendees, and Reserve staff. Training providers were first contacted by telephone to request their participation. Respondents then answered the questionnaire as an email attachment directly sent to them. Twenty-two providers responded to the survey, yielding a 69 percent response rate. Only 17 of the 22 respondents provided the type of training described in the survey, so their responses were the focus of the Market Analysis report.

The survey instrument was a three-page electronic questionnaire consisting of seven close-ended questions and four open-ended questions. Approximate completion time was 30 minutes. Those who did not respond to the first telephone request and email were sent one additional reminder to complete the survey.

The North Inlet-Winyah Bay and ACE Basin Reserves conducted a thorough analysis of the data collected through the survey. The Reserves identified the training audience profile, identified gaps and opportunities for both Reserves, and felt they developed a sound understanding of the market from the survey. Frequencies, descriptive statistics, charts, and tables were all employed to describe the survey outcomes.

Needs Assessment

For the Needs Assessment, North Inlet-Winyah Bay employed the use of a mail survey sent to 240 city and county officials (both elected and appointed professionals) in three coastal counties. A total of 60 responses, representing a 25 percent response rate, were analyzed. The purpose of the Needs Assessment was to characterize the training topics and delivery needs of the audience.

The list of survey recipients was compiled from city and county website directories and lists provided by city and county clerks. The survey audience

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consisted of city and county council members, planning commission members, mayors, and city and county administrators. North Inlet-Winyah Bay employed the use of frequencies, descriptive statistics, charts, and tables to depict and analyze the data findings. The Reserve identified an audience profile, training preferences, topics, and delivery and communication methods.

Old Woman Creek NERR

Market Analysis

Old Woman Creek contracted an academic consultant to conduct its Market Analysis. The following methods were employed for this process: a literature review; a best practices scan of state and national models and providers; data collection to establish an inventory of state training providers; and a telephone, electronic, and faxed survey instrument. The data generated from this effort were analyzed using descriptive statistical techniques and frequency distributions, including depiction of results in GIS maps, tables, graphs and matrices.

The total number of potential providers surveyed was 190, with 142 responding to the survey (75 percent response rate). The survey questions were analyzed and reported for aggregate results and for each of the three waves of surveys. Topics, audiences, marketing techniques used by providers, and gaps in training provision were identified.

Needs Assessment

The same academic consultant also conducted the Reserve's Needs Assessment. The Needs Assessment utilized focus groups of both providers and non-providers of coastal training with participants drawn from 34 coastal and watershed counties. Seven focus groups – six non-provider groups and one training provider group – were held involving 57 participants.

The results were reported based on core knowledge needs and training needs. Focus group participants were also surveyed on training issues of importance at the beginning of each focus group. Data from those surveys are reported using frequencies, other descriptive statistics, and bar charts.

Padilla Bay NERR

Market Analysis

The goals of Padilla Bay's Market Analysis were to develop an inventory of coastal management training providers in the state of Washington, and to identify the gaps in existing training and opportunities. An initial list of survey

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recipients was provided by the CTP Advisory Group, and each initial respondent was asked to provide other contacts. A total of 123 people contacted by electronic survey comprised 51 different agencies. Survey responses were received from 67 of those 123 people.

There was no indication of the initial population on the list provided by the Advisory Group, and there were no statistical analyses provided in the report. The report focused on concise tables of information that answered the overriding questions of audience, topics, and gaps.

Needs Assessment

The CTP Advisory Group compiled a list of 192 individuals (after discarding bad email addresses) for the Reserve's Needs Assessment. These individuals were contacted via electronic survey. A total of 122 respondents completed the online survey (64 percent response rate). The survey report provided tabulations for each question, and additional data was reported through reports furnished by SurveyMonkey.com. Frequencies and tables were used to present the results.

Rookery Bay NERR

Market Analysis

An external contractor, with the Reserve indicating it would again use an external organization but perhaps with a different process, completed the Market Analysis for Rookery Bay NERR. Although the Reserve felt that an online survey would have been better for the project, staff members followed up with telephone interviews. This method was perceived as having potential for a higher response rate. A survey was used, and telephone follow up conversations/interviews were employed to gain additional information from respondents.

The Market Analysis study was conducted statewide, depending upon the organization surveyed (some operate statewide, some in southwestern Florida, some just in the Florida Keys). However, the Reserve's geographic target for training programs is southwestern Florida. The response rate to the Market Analysis was 36 percent. In addition to the initial respondents, a group of eight planning practitioners was also either mailed or faxed the survey, and two planners participated in telephone interviews.

The Market Analysis document states that, as conducted, the Market Analysis did not provide sufficient information to fully characterize the training market in southwest Florida, with respect to audiences and issues already addressed by other programs within the region. Open-ended questions

generated very short, sometimes inconclusive answers. The Reserve anticipates conducting follow-up surveys and telephone calls, and recognizes the need to regularly update information because it perceives that the coastal training market is changing.

Needs Assessment

The Needs Assessment was conducted in two parts – an overall Needs Assessment and a subsequent (following months) Needs Assessment of southwest Florida planners. Data collection for the Needs Assessment was conducted by survey. Focus groups were then held to retrieve anecdotal information and additional information. The Reserve intends to conduct the Needs Assessment “in-house” as this provides a useful mechanism to build relationships with the community and identify potential training participants.

Sapelo Island NERR

Market Analysis

The Market Analysis and Needs Assessment studies for the Sapelo Island NERR were both conducted in 2003. For the Market Analysis, data was collected by the University of Georgia’s Survey Research Center. The compiled data was analyzed by the reserve. Staff from the Reserve also indicated that they would again use this approach.

The Reserve rated the Market Analysis process as very useful and described it as being an “eye-opener.” The survey was specifically designed to determine (a) the programs currently being offered to the decision-maker audience by other provider groups in coastal Georgia; (b) the audiences they serve; and (c) the issues they address. The survey instrument was also developed “with the potential of working with nearby Reserves in mind.”

To identify coastal training program providers, a total of 34 organizations were selected from *Coastal Studies in Georgia: A Guide to Organizations Involved in Education and Research Activities*, by Anne Lindsay Frick of the University of Georgia Marine Education Center and Aquarium. This publication provides a summary of environmental education and outreach programs on the Georgia coast. If providers offered multiple programs, organizations were asked to submit a survey for each program. After initial efforts to contact each of the providers by phone or email, surveys were sent out to providers in June 2002. Completed surveys were received throughout the summer. A total of 23 respondents completed surveys. After some providers were removed from the pool (such as those who worked exclusively with K-12 audiences), a total of 15 completed surveys were analyzed for the Market Analysis.

Needs Assessment

The Needs Assessment segment was also conducted in-house by the Reserve. As part of the Needs Assessment, some documentation from the Regional Development Council was also utilized during this process. This phase was judged by the Reserve to have been more difficult than the Market Analysis segment, most likely because of the target audience chosen – elected officials. The Reserve indicated that it did not get the response it desired and that the timing of the study, which coincided with election for some officials, may have affected the overall response rate.

Utilizing the findings uncovered in the Market Analysis, the Needs Assessment was conducted among target audiences and focused on gauging the needs and program formatting preferences of decision-makers within an 11-county region. In particular, efforts were made to determine critical coastal issues, ideal workshop settings and formats, and specific resources that would be most helpful to training providers. Like the Market Analysis, the Needs Assessment survey was designed to enable potential data sharing on a regional basis. A total of 318 surveys were sent to elected officials in nine coastal counties and 30 cities, utilizing contact information obtained from the *2002 City/County Directory* (a publication from the Coastal Georgia Regional Development Center). Surveys were sent out in October 2002 and participants were given eight weeks to respond. In December 2002, a total of 49 completed surveys (15 percent response rate) were sent to an academic consultant for the tabulation and summarization of data.

South Slough NERR

Market Analysis

The South Slough NERR formed a CTP Advisory Group to determine the priority of training efforts across six categories, recommend appropriate target audiences, determine appropriate methods for delivering training, identify partners to assist with funding, and advise on methods for further analyses. Reserve staff and representatives from other organizations assisted in developing a list of potential training providers for the Market Analysis.

A Microsoft Access database was then assembled of the potential providers. From this database, 24 were contacted by telephone for an interview, and 13 of those were completed. The interviews were guided by questions, but these questions were not scripted. This allowed for probing and clarification. The Reserve also sent out email requests to 25 people, and six were returned. Email surveys were then sent out to these six respondents.

Information was also generated from participants at two workshops offered to coastal land use planners. The workshops were a series of three informal, daylong events that targeted county and city planners, state agency personnel, elected officials, and consultants. Participants of the first workshop completed 12 surveys, while eight were completed at the second workshop. These served more as a pilot test for future research rather than a scientific method of analysis. The findings were then inventoried using lists, graphs, tables, and descriptive statistics.

Needs Assessment

The Needs Assessment was basically a limited survey of a selected group of decision-makers conducted by the CTP coordinator that allowed for identification of target audiences. Responses were primarily collected through a U.S. mail survey and telephone interviews. The methods for the data collection were primarily chosen due to time constraints, which precluded the use of lengthier survey methods. The Reserve indicated that it would like to use the services of an external contractor for future Needs Assessments.

Waquoit Bay NERR

Market Analysis

An external academic contractor was utilized for the Waquoit Bay NERRS Market Analysis, which was completed in 2003. Three research objectives were identified – to create a statewide inventory of training programs, to identify gaps and overlaps in available training services, and to identify potential training partners. Four protocols were selected to collect the necessary information for the Market Analysis:

- A brief interview with past participants of training;
- Structured interviews with training providers;
- A written survey of training providers; and
- A focus group of training providers.

A total of 134 potential coastal management training providers were identified and sent written surveys. To be considered for this group, it was determined that a particular program must target coastal decision-makers and meet at least two of the following criteria:

- Increase knowledge or skills of coastal decision-makers;
- Enable an interaction with an expert; or
- Enable a participant to tap into a network of professionals.

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Thirty-four completed surveys were returned (25 percent response rate), among which a total of 18 surveys indicated that the organization provided training to coastal decision-makers.

Needs Assessment

The Needs Assessment segment, conducted by the same academic contractor and also completed in 2003, focused upon the following key questions:

- Who are the local government officials from the coastal towns of Massachusetts?
- Which of them are most likely to attend training?
- What topics and what specific content (related to coastal issues) appeal to them?
- What delivery formats appeal to them?
- What are their preferences with regard to timing, location, and other details?
- Are there sub-groups that have distinctive preferences?

The Needs Assessment study utilized small group interviews and a questionnaire as the primary means of data gathering. The process of Needs Assessment activities proceeded in the following sequence: Database development and sampling, questionnaire development, small group interviews – with questionnaire pilot testing, questionnaire revision and administration, and data analysis and reporting.

The database of municipal officials was developed using information from municipal websites or listings provided by town or city clerks. For the first phase of the study (small group interview phase), 285 names were selected from the database, representing a cross section of the municipalities and various roles represented in the database. These individuals were then invited to participate in one of 10 small group interviews conducted on coastal issues and training. A total of 54 participants took part in these small group interviews, while an additional 14 members of two pre-existing networking groups participated in similar discussions.

The second phase of the Needs Assessment study (questionnaire phase) began with selecting a stratified random sample of 1,035 names taken from the database. These individuals, along with the 54 small group discussion participants, were each sent a four-page questionnaire by U.S. mail. Three “thank you” gifts in the \$50 range were awarded by drawing among the completed surveys received by the deadline. A total of 169 completed questionnaires were returned, for an overall response rate of 15 percent.

Weeks Bay NERR

Market Analysis

The geographic scope of the Market Analysis for Weeks Bay NERR included two coastal counties in Alabama, as well as Escambia County, Florida and Jackson County, Mississippi. The scope for the Market Analysis was well outside the estuary boundaries, and was defined in terms of the watershed area feeding the estuary and the likely catchment area for training participants based upon driving time. The target audience for the analysis was coastal and natural resource practitioners.

Coastal training staff reports that the survey was done by the South Alabama Regional Planning Commission due to a vacant position at the Reserve and, that if done again would be completed in-house. The Reserve used a mailed survey to gather data. Potential contacts for the survey participants were identified through a brainstorming session with the coastal training staff and NERR Advisory Committee.

The Market Analysis survey was designed and administered by an outside consultant, chosen in part because of its familiarity with land use issues in the region, and its familiarity with land use and resource practitioners and organizations. The effort resulted in surveys from 20 providers (survey sent to 43 potential respondents; 43 percent response rate). The Reserve was disappointed in the response rate, and will seek to secure a higher number of surveys if the study is repeated. The contractor chose not to use an online survey such as SurveyMonkey.com because the resulting raw data would not be owned by the Reserve, and the Reserve wanted ownership for possible future use. Reserve staff noted that because the market study area was southern Alabama, it was likely that few of the desired participants would have participated in the online survey method.

Needs Assessment

A survey was also used for the Needs Assessment segment of the project, again administered by the South Alabama Regional Planning Commission. The Advisory Committee was asked to brainstorm ideas for the Needs Assessment. The Needs Assessment was based on the results of the Market Analysis and constituted a “gap” analysis; that is, topical and delivery gaps in the Market Analysis identified the set of under-served training audiences in the Reserve service area. The Needs Assessment survey was sent to these target audiences (including county commissioners, community organizations, and industry groups) in Baldwin and Mobile counties to ascertain training and knowledge needs. Surveys were not distributed in Mississippi at the request of Grand Bay NERR, which is also developing its coastal training program.

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Surveys were sent to 156 potential participants; 46 were returned, constituting a 30 percent response rate. There was a desire by the Reserve for a higher response rate. Primary target audiences for the survey were municipal and county administrators, building and zoning administrators, planning staff and commission members, public works practitioners, community-based stakeholders in the non-profit and private sectors, and environmental managers.

The top three program opportunities include development of an interactive CTP website; the establishment of the program as a “go-to” source for environmental resource information in Southern Alabama; and the link between research findings to the audiences that need information, particularly to previously underserved groups. Barriers to the success of the CTP program and its development include the slow bureaucratic processes for funding and associated contract agreements.

Wells NERR

Market Analysis

The Reserve conducted its Market Analysis partially in-house and partially by an external contractor. The Market Analysis was completed in 2002, and the findings were used to design the Needs Assessment study.

The CTP Advisory Committee decided which agencies, organizations, and individuals within these groups should be included in the Market Analysis. A total of 24 organizations and agencies were identified as providers of coastal decision-maker training and outreach services in the southern Maine region. A total of 29 environmental, conservation, planning, and government training service providers were interviewed, representing the 24 organizations and agencies. A Steering Committee comprised of Reserve staff and consultants designed the Market Analysis and Needs Assessment protocols. Interviews were chosen as the primary data collection strategy for the Market Analysis, due to the open-ended nature of this mechanism.

Needs Assessment

The Needs Assessment was also completed in 2002. The CTP Advisory Committee first identified 16 community decision-makers from 14 towns for in-depth interviews. The interview questions were open-ended and focused on two major categories – coastal issues facing the town and how they were addressed; and comments on training and outreach gaps and needs.

The CTP Advisory Committee met and decided which potential audience members should be interviewed for the Needs Assessment. Interview candidates

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were community leaders and/or municipal officials generally perceived as leaders in their professions.

The second part of the Needs Assessment involved a survey that was mailed to 212 coastal decision-makers in southern Maine. A total of 91 usable surveys were returned for a response rate of 43 percent. Survey respondents included a broad cross-section of potential target audience members, including town planners, code enforcement officers, land trust members, public works directors, resource managers, scientists, and municipal officials. The Advisory Committee identified municipal officials, members of volunteer planning boards, conservation commissions, and land trusts in coastal southern Maine towns as important decision-makers (The Coastal Mosaic Project at the Reserve provided many of the contacts for land trust and conservation commission members). The Southern Maine Regional Planning Commission provided a mailing list of Code Enforcement Officers and Town Planners. Additional municipal contacts were also obtained through town websites and surveys. Surveys were also sent to conservation groups such as the Maine Audubon Society, The Nature Conservancy, the University of New England, and state and federal land management agencies working in the region.

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**Appendix B:
The Great Lakes
Environmental Finance Center**



SECTION 1: GENERAL PROGRAM INFORMATION

Background

- 1) Name of Reserve:
- 2) Location (city, state):
- 3) Year program began:
- 4) Program Budget: \$
- 5) Who's in charge of program (and title)? (Coordinator, Reserve manager, etc.)
- 6) Partners Total #:
 List partners:

Stages of Program Assessment

Stage			
7) Steering / Advisory Committee	<input type="checkbox"/> Complete	<input type="checkbox"/> Incomplete	<input type="checkbox"/> Report Available
8) Market Analysis	<input type="checkbox"/> Complete	<input type="checkbox"/> Incomplete	<input type="checkbox"/> Report Available
9) Needs Assessment	<input type="checkbox"/> Complete	<input type="checkbox"/> Incomplete	<input type="checkbox"/> Report Available
10) Marketing Plan	<input type="checkbox"/> Complete	<input type="checkbox"/> Incomplete	<input type="checkbox"/> Report Available
11) Strategic Plan	<input type="checkbox"/> Complete	<input type="checkbox"/> Incomplete	<input type="checkbox"/> Report Available

SECTION 2: ADVISORY GROUP/STEERING COMMITTEE

- 12) Has the advisory group been formed? Y N

Operational Structure

- 13) Number of members:

- 14) Group membership Categories:

- Don't know – not specified
- Local
- State
- Federal
- Nonprofit
- Other: _____

- 15) Terms/Duration of membership:

- 16) Frequency/Duration/Location of meetings:

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17) CTP Coordinator's role to Advisory Group?

- Don't Know
- Is a member
- Not a member
- Is a consultant or advisor

18) Reserve's role to Advisory Group?

Operating Procedures:

19) Briefly describe the role / purpose of group:

19a.) Does Advisory Group make recommendations? Y N
If so, to whom

19b.) Does Advisory Group have decision-making authority? Y N

20) Briefly describe the voting procedures of group:

21) What are the method(s) of communications to/from members?

22) Describe its activities / role to date:

23) Method(s) for selection of future members:

SECTION 3: MARKET ANALYSIS

Report Components/Content

24) Market analysis goals / objectives (list)

25) Describe the geographic scope of the study (list areas):

26) The report describes methodologies used: Y N

27) The report identifies the training providers: Y N

27a.) Total number of providers identified:

27b.) List name & type providers (federal, state, local, etc.):

28) The report lists the total number of training topics or activities: Y N

28a.) List top 5 training topics or activities:

29) The educational background of instructors is identified: Y N

29a.) Primary educational background / degree:

30) Report identifies the frequency / duration of training identified Y N

30a.) Primary frequency/duration of training:

31) The report identifies training delivery mechanisms: Y N

31a.) List top 5 mechanisms:

32) Training costs are identified: Y N

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- | | | | |
|--|--------|---------|--------|
| 32a.) Training cost ranges from low to high: | low \$ | high \$ | |
| 33) Training incentives are identified: | | | Y N |
| 33a.) Describe incentives: | | | |
| 34) Target audiences are identified: | | | Y N |
| 34a.) Primary target audiences: | | | |
| 35) The methods for marketing to audiences are identified: | | | Y N |
| 35a.) Top 5 marketing methods: | | | |
| 36) Partnerships are identified: | | | Y N |
| 36a.) List partnerships: | | | |
| 37) The report includes findings and outcomes | | | Y N |
| 37a.) Describe major findings/outcomes: | | | |
| 38) Gaps / opportunities are identified: | | | Y N |
| 38a.) Describe/list: | | | |
| 39) The report includes appendices: | | | Y N |
| 39a.) What are included in the appendices: | | | |
| 40) Check all modes of analysis found in report: | | | |
| <input type="checkbox"/> Frequencies | | | |
| <input type="checkbox"/> Descriptive/basic statistics (mean, median, mode) | | | |
| <input type="checkbox"/> Correlation analysis | | | |
| <input type="checkbox"/> Regression analysis | | | |
| <input type="checkbox"/> Maps / GIS | | | |
| <input type="checkbox"/> Charts (pie, bar, graph etc.) | | | |
| <input type="checkbox"/> Tables | | | |
| <input type="checkbox"/> Other method(s) | | | |

Data Collection

- 41) Were any of the following methods were used to collect data for the inventory of training providers?
- | | | | |
|---------------------------|---|---|--|
| 41a.) Mail survey | Y | N | |
| Number contacted: ____ | | | |
| Number of responses: ____ | | | |
| Response rate: __% | | | |
| 41b.) Telephone survey | Y | N | |
| Number contacted: ____ | | | |
| Number of responses: ____ | | | |
| Response rate: __% | | | |
| 41c.) Web-based survey | Y | N | |
| Number contacted: ____ | | | |
| Number of responses: ____ | | | |
| Response rate: __% | | | |

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53) Check all modes of analysis found in report:

- Frequencies
- Descriptive/basic statistics (mean, median, mode)
- Correlation analysis
- Regression analysis
- Maps / GIS
- Charts (pie, bar, graph etc.)
- Tables
- Other method(s)

Data Collection

54) Were any of the following methods were used to collect data for the inventory of training providers?

- | | | | |
|--|---|---|---|
| 54a.) Mail survey | Y | N | |
| Number contacted: ____ | | | |
| Number of responses: ____ | | | |
| Response rate: __% | | | |
| | | | |
| 54b.) Telephone survey | Y | N | |
| Number contacted: ____ | | | |
| Number of responses: ____ | | | |
| Response rate: __% | | | |
| | | | |
| 54c.) Web-based survey | Y | N | |
| Number contacted: ____ | | | |
| Number of responses: ____ | | | |
| Response rate: __% | | | |
| | | | |
| 54d.) Focus group / nominal group technique | Y | N | |
| Number of focus groups: ____ | | | |
| Total number of participants in focus groups: ____ | | | |
| Types of professions represented (list): | | | |
| Professional experience: | | | <input type="checkbox"/> <5 years
<input type="checkbox"/> 5-10 years
<input type="checkbox"/> 11-20 years
<input type="checkbox"/> > 20 years |
| Focus groups conducted by: | | | <input type="checkbox"/> In-house staff
<input type="checkbox"/> External contractor
<input type="checkbox"/> Other(s) (identify): _____ |
| | | | |
| 54e.) In-person interviews | Y | N | |
| Number contacted: ____ | | | |
| Number of responses: ____ | | | |
| Response rate: __% | | | |

55) A combination of the above were used
Which methods? Describe:

56) Other method(s) not listed above were used. Describe:

57) Was comparison conducted of Market Analysis and Needs Assessment (first and second phases)? Y N
If so, what were the findings?

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SECTION 5: MARKETING PLAN
Report Components/Content

- 58) What were the goals of the marketing plan?
- 59) Describe the marketing strategy (promotion, outreach, etc.)?
- 60) Describe the primary marketing tools / methods:
- 61) Is there a target or timeline for implementation? Y N
- 62) Does the report list the targeted audiences? Y N
62a.) If so, list:
- 63) The report cites training topics / issues: Y N
List primary topics:
- 64) The report lists current partners: Y N
64a.) List partnerships:
- 65) The report lists anticipated partners: Y N
65a.) What methods does it reference for identifying future partners?
- 66) The report lists budgetary / resource needs for program implementation: Y N
- 67) The report identifies program monitoring and evaluation processes: Y N
How frequently will they be used? _____

SECTION 6: STRATEGIC PLAN

- 68) What were the goals of the strategic plan?
- 69) What are the primary objectives of the Coastal Training Program?
- 70) What staffing and infrastructure support do they anticipate needing for the CTP?
- 71) The strategic plan lists budgetary / resource needs for the CTP: Y N
71a.) Available/Needed Resources:
- 72) Is there a target or timeline for implementation of the strategic plan? Y N
- 73) The strategic plan cites training topics / issues that will be emphasized in the CTP: Y N
List primary topics:
- 74) Does the strategic plan lists targeted audiences? Y N
62a.) If so, list:
- 75) The report lists current partners: Y N
75a.) List partnerships:
- 76) The report lists anticipated partners: Y N
76a.) What methods does it reference for identifying future partners?
- 77) The report identifies program monitoring and evaluation processes: Y N
How frequently will they be used? _____

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**Appendix C:
The Great Lakes
Environmental Finance Center**



Background Information

- 1) Name of Reserve _____
- 2) Location _____
- 3) Name of Contact Person _____
- 4) Title _____ 5) Phone _____

Coastal Training Program Physical/Market Geography

6) What is the current geographic scope for your coastal training program? (write in):

- Regional (please describe): _____
- State _____
- Other (write in): _____

7) What do you perceive to be the future geographic scope for your coastal training program? (write in):

- Regional (please describe): _____
- State _____
- Other (write in): _____

7a.) Upon what have you based this decision? _____

Coastal Training Program Status

8) Which phase are you currently in with the development of your coastal training process?

- Advisory Committee
- Market Analysis
- Needs Assessment
- Marketing Plan
- Strategic Plan
- Implementation (completed approval process and are ready to move on)

9) When did you/will you complete the following phases of your coastal training process? Which phase(s) are you implementing at this time?

Advisory Committee (mo/yr): _____	Implementing: Y	N
Market Analysis (mo/yr): _____	Implementing: Y	N
Needs Assessment (mo/yr): _____	Implementing: Y	N
Marketing Plan (mo/yr): _____	Implementing: Y	N
Strategic Plan (mo/yr): _____	Implementing: Y	N

10) Overall, how useful was each phase in developing your coastal training program, and why?

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	<u>Very Useful</u>	<u>Somewhat Useful</u>	<u>Neutral</u>	<u>Not Useful</u>	<u>Phase Not Complete</u>
ADVISORY COMMITTEE	<input type="checkbox"/>				
Why?					
MARKET ANALYSIS	<input type="checkbox"/>				
Why?					
NEEDS ASSESSMENT	<input type="checkbox"/>				
Why?					
MARKETING PLAN	<input type="checkbox"/>				
Why?					
STRATEGIC PLAN	<input type="checkbox"/>				
Why?					

Changes in Program Objectives

11) Have there been any procedural or programmatic changes since the program strategy was first written (i.e. the direction the advisory committee has taken, in courses, issues targeted, geographic scope, audiences, goals, objectives, etc.)? If so, please explain how. Y N

Explain: _____

12) Have your core partners changed in any way over the development of the various phases of your coastal training program (same partners, identified new partners, removed partners)? If yes, please discuss these changes. Y N

12a.) What is the nature of your relationship with these core partners? (check all that apply):

- They provide financial resources / funding
- They provide facilities for training
- They provide instructors and specialists with expertise
- They provide technology and/or technological expertise
- They provide marketing / advertising assistance
- Other (write in): _____

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13) Are there any other training providers or types of providers that you have identified since conducting your marketing analysis that were previously overlooked? (Skip question if they have not yet conducted their marketing analysis). Y N
If yes, please discuss examples or types.

14) Have there been any changes to any of the phases or to the program content as a result of new information that may have been revealed in your strategizing process? If so, please explain how. Y N

Explain: _____

Approaches to Gathering Data/Information

15) Who conducted each of the various phases?

ADVISORY COMMITTEE

- | | |
|--|---|
| <input type="checkbox"/> In-house | <input type="checkbox"/> Would use this approach again |
| <input type="checkbox"/> External Contractor | <input type="checkbox"/> Would <u>not</u> use this approach again |
| <input type="checkbox"/> Other: _____ | → Would change to: _____ |
-

MARKET ANALYSIS

- | | |
|--|---|
| <input type="checkbox"/> In-house | <input type="checkbox"/> Would use this approach again |
| <input type="checkbox"/> External Contractor | <input type="checkbox"/> Would <u>not</u> use this approach again |
| <input type="checkbox"/> Other: _____ | → Would change to: _____ |
-

NEEDS ASSESSMENT

- | | |
|--|---|
| <input type="checkbox"/> In-house | <input type="checkbox"/> Would use this approach again |
| <input type="checkbox"/> External Contractor | <input type="checkbox"/> Would <u>not</u> use this approach again |
| <input type="checkbox"/> Other: _____ | → Would change to: _____ |
-

MARKETING PLAN

- | | |
|--|---|
| <input type="checkbox"/> In-house | <input type="checkbox"/> Would use this approach again |
| <input type="checkbox"/> External Contractor | <input type="checkbox"/> Would <u>not</u> use this approach again |
| <input type="checkbox"/> Other: _____ | → Would change to: _____ |
-

STRATEGIC PLAN

- | | |
|--|---|
| <input type="checkbox"/> In-house | <input type="checkbox"/> Would use this approach again |
| <input type="checkbox"/> External Contractor | <input type="checkbox"/> Would <u>not</u> use this approach again |
| <input type="checkbox"/> Other: _____ | → Would change to: _____ |
-

16) How extensively were Reserve staff members involved in developing plans and reviewing results during each of the phases?

**Trends Analysis of Coastal Training Programs
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	<u>To a Great Extent</u>	<u>Periodically</u>	<u>Not At All</u>	<u>Phase Not Yet Initiated</u>
ADVISORY COMMITTEE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MARKET ANALYSIS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NEEDS ASSESSMENT	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MARKETING PLAN	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
STRATEGIC PLAN	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

17) What were the methods and approaches employed to collect data/information during each phase of the development of your coastal training program?

ADVISORY COMMITTEE

MARKET ANALYSIS

NEEDS ASSESSMENT

MARKETING PLAN

STRATEGIC PLAN

18) Why did you select the methods you chose for each of the various phases?

ADVISORY COMMITTEE

MARKET ANALYSIS

NEEDS ASSESSMENT

MARKETING PLAN

STRATEGIC PLAN

**Trends Analysis of Coastal Training Programs
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19) Did you encounter any problems or shortcomings within each phase due to the method(s) used to collect data/information? If so, please describe.

ADVISORY COMMITTEE

Y N

MARKET ANALYSIS

Y N

NEEDS ASSESSMENT

Y N

MARKETING PLAN

Y N

STRATEGIC PLAN

Y N

20) Would you have approached any of the project phases differently (for instance, used an online survey but would have used focus groups instead, or vice versa)? If yes, please discuss how and what technique you would have employed.

ADVISORY COMMITTEE

Y N

MARKET ANALYSIS

Y N

NEEDS ASSESSMENT

Y N

MARKETING PLAN

Y N

STRATEGIC PLAN

Y N

Coastal Training Program Findings/Outcomes

21) Were any of the findings from each phase of your coastal training program surprising or unanticipated? Please explain.

**Trends Analysis of Coastal Training Programs
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ADVISORY COMMITTEE

Y N

MARKET ANALYSIS

Y N

NEEDS ASSESSMENT

Y N

MARKETING PLAN

Y N

STRATEGIC PLAN

Y N

22) Based upon your overall findings, what would you say are the top three program opportunities for the future of your coastal training program?

1. _____

2. _____

3. _____

23) Based upon the overall findings, what would you say are the top three program barriers or constraints for the future of your coastal training program?

1. _____

2. _____

3. _____

24) Do you have any final comments or thoughts you would like to add at this time?

Appendix D: Email Letter to NERRS to Conduct Telephone Interview

The National Oceanic and Atmospheric Administration (NOAA) and the National Estuarine Research Reserves (NERRS) have undertaken the development of a Coastal Training Program that strategically targets key audiences in Reserves around significant issues. The NOAA and NERRS intend to develop collaborative Coastal Training Program partnerships for program planning and delivery to those engaged in coastal decision-making activities.

NOAA has engaged the Great Lakes Environmental Finance Center (GLEFC) of the Maxine Goodman Levin College of Urban Affairs at Cleveland State University to conduct a review and analysis of the Coastal Training Program documents resulting from NERRS coastal training initiatives. The analysis will identify trends and commonalities in program approaches, partnerships, priority issues, target audiences and their needs, and characteristics of regional training markets.

One component of this analysis is to conduct telephone interviews with the individuals involved in the development of the Coastal Training Program at each Reserve. You have been selected by NOAA and the Coastal Training Trends Analysis Work Group to participate in our interview process. The interviews will provide the GLEFC with an in-depth perspective of each Reserve's choice of methodology, successes/challenges to the process, program changes or modifications, and how findings were applied or implemented. The GLEFC will use the information from the interviews to develop a profile of each Reserve. A draft of the Reserve's profile will be forwarded to you for your review.

A member of the GLEFC Team will be contacting you soon to schedule your telephone interview. A copy of the questionnaire that will be used for the interview is included as an attachment to this correspondence so that you have an opportunity to read and reflect on the questions beforehand.

We appreciate your assistance in helping us with our research efforts. If you have any questions concerning this survey or the project, please contact either Kate Barba, NOAA Program Manager, at (303) 713-3155, extension 182, (kate.barba@noaa.gov), or me, Claudette Robey, GLEFC Assistant Director, at (216) 875-9988, (crobey@urban.csuohio.edu). Once again, thank you, and we look forward to our interview with you.

***Trends Analysis of Coastal Training Programs
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Appendix E: Matrices of NERRS Trends

I. Trends in Priority Coastal Training Topics and Issues

Table 3

NERRS PRIORITY COASTAL TRAINING TOPICS AND ISSUES	
Reserve	Priority Coastal Resource Issues
Ace Basin – SC	Habitat protection, water quality, best management practices, land use planning, infrastructure planning and sewage treatment
Delaware - DE	Wetlands and waterways protections, environmental aspects of land use, land use planning, Livable Delaware
Elkhorn Slough - CA	Sensitive habitat and species (including buffers, wetland ecology, efficacy of mitigation, endangered species, and maritime chaparral)
Hudson River - NY	Land use planning, stormwater management, biodiversity, non-point source pollution control, watershed protection, invasive species management, habitat restoration, and recreation use impacts on resources
Jacques Cousteau - NJ	Habitat issues, coastal issues, water quality issues; education, planning and regulation issues
Jobos Bay - PR	Sustainable development, coastal zone planning, coastal resource management, tourism, urban sprawl, social processes in the coastal zone
Kachemak Bay - AK	Coastal erosion, floodplain science and policy, wetland functions, marine-derived nutrients, remote sensing applications, and invasive species
Narragansett Bay - RI	Wetlands ecology, impact of invasive species, endangered species in the community, urban sprawl, recreation/tourism development, planning town-wide greenways, water supply and quality
North Carolina - NC	Community/local planning, septic system health, intergovernmental cooperation, wetlands loss, stormwater management, clean marinas, microbial pollution, grant writing, and community planning
North Inlet-Winyah Bay - SC	Stormwater runoff (especially contaminants), beach processes and erosion control/coastal hazards, urban/infrastructure planning (stormwater planning & protection, including training, planning, ordinance review), neighborhood/residential land use planning, stemming the tide of growth-oriented attitudes of public officials/CDM, coastal hazards, roads and bridges
Old Woman Creek - OH	Consistent quality information, better organized and sharing of resources; economic aspects of CRM and protection; Lake Erie shoreline and water resources; land use/infrastructure; public health; cultural resources
Padilla Bay - WA	Technical assistance to shoreline communities in updating their shoreline master plans; shoreline modifications, laws, buffers, near shore habitats; wetlands; continuing with consistent offering of core trainings
Rookery Bay - FL	Land use planning and impacts on resources; endangered species, fishing regulations and poaching; rapidly changing land use in watersheds and adjacent coastal areas; native biodiversity is declining because of exotic species and fire suppression; careless or incompatible public use of the Reserve is increasing
Sapelo Island - GA	Water resource, natural habitat, and coastal development issues
South Slough - OR	Water quality issues, coastal wetland and estuarine habitat restoration, invasive species control and management, managing visitor impacts, management alternatives for nearshore environments (Marine Protected Areas [MPAs]), and the impact of climate change on coastal communities

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NERRS PRIORITY COASTAL TRAINING TOPICS AND ISSUES (continued)	
Reserve	
Waquoit Bay - MA	Aquaculture, habitat protection and restoration, coastal processes/geology, fisheries, wetlands and waterways protection, renewable energy use, climate change, invasive species, and atmospheric nitrogen deposition
Weeks Bay - AL	Reduction of non-point source pollution, land use management practices on coastal and estuarine habitats, protection of water resources, preservation of biodiversity, and management of invasive species
	Watersheds and water quality (identified as a top program opportunity for the future of the CTP); providing a “suite” of services, including GIS and capacity building

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Table 4

Reserve	NERRS Priority Coastal Training Issues										
	Land Use Planning	Infrastructure Provision/Mgmt	Habitat/Wetlands	Science Monitoring	Coastal Planning/Development	Econ Development Cultural Resources	Air/Water Pollution Control	Regulatory/Enforcement/Legal	NERRS Programs/Partners	Misc*	
Ace Basin – SC	X	X	X			X					
Delaware – DE	X		X		X						
Elkhorn Slough – CA	X		X								
Hudson River – NY	X	X	X		X	X	X				
Jacques Cousteau – NJ	X		X		X						
Jobos Bay – PR	X		X		X	X					
Kachemak Bay – AK			X	X							
Narragansett Bay – RI	X		X			X					
North Carolina – NC	X	X	X			X	X			X	
North Inlet-Winyah Bay – SC	X	X			X			X			
Old Woman Creek – OH	X				X	X		X		X	
Padilla Bay – WA	X		X		X			X	X		
Rookery Bay – FL	X		X								
Sapelo Island – GA			X		X		X				
South Slough – OR			X	X		X					
Waquoit Bay – MA			X	X		X					
Weeks Bay – AL	X		X			X			X		
Wells – ME				X		X			X		
	13	4	14	4	8	7	9	5	2	2	
	72%	22%	76%	22%	44%	36%	50%	28%	11%	11%	

*Miscellaneous category includes priority coastal training topics of intergovernmental cooperation, grant writing (North Carolina), public health (Old Woman Creek).

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Table 5

Reserve	NERRS Priority Coastal Training Issues (By NOAA Regions)										Misc*
	Land Use Planning	Infrastructure Provision/Mgmt	Habitat/Wetlands	Science Monitoring	Coastal Planning/Development	Econ Development Cultural Resources	Air/Water Pollution Control	Regulatory/Enforcement/Legal	NERRS Programs/Partners		
GULF REGION											
Jobs Bay – PR	X				X	X					
Rookery Bay – FL	X		X				X				
Weeks Bay – AL	X		X				X				
GULF TOTAL	3	0	2	0	1	1	1	1	0	0	0
MID-ATLANTIC REGION											
Delaware – DE	X		X		X		X				
Jacques Cousteau – NJ	X		X		X			X			
Old Woman Creek – OH	X				X	X		X			X
MID-ATLANTIC TOTAL	3	0	2	0	3	1	1	2	0	0	1
NORTHEAST REGION											
Hudson River – NY	X	X	X			X	X				
Narragansett Bay – RI	X		X			X	X				
Waquoit Bay – MA			X	X		X					
Wells – ME			X	X			X		X		
NORTHEAST TOTAL	2	1	3	2	0	3	3	0	1	1	0
PACIFIC REGION											
Elkhorn Slough – CA	X		X								
Kachemak Bay – AK			X	X							
Padilla Bay – WA	X		X		X			X		X	
South Slough – OR			X	X		X	X				
PACIFIC REGION TOTAL	2	0	4	2	2	1	1	1	1	1	0

Trends Analysis of Coastal Training Programs of the National Estuarine Research Reserve System

NERRS Priority Coastal Training Issues (By NOAA Regions -continued)										
Reserve	Land Use Planning	Infrastructure Provision/Mgmt	Habitat/ Wetlands	Science Monitoring	Coastal Planning/ Development	Econ Development Cultural Resources	Air/Water Pollution Control	Regulatory/ Enforcement/ Legal	NERRs Programs/ Partners	Misc*
SOUTH EAST REGION										
Ace Basin – SC	X	X	X				X			
North Carolina – NC	X	X	X			X	X			X
North Inlet/Winyah Bay – SC	X	X			X			X		
Sapelo Island – GA			X		X		X			
SOUTH EAST TOTAL	3	3	3	0	2	1	3	1	0	1
	13	4	14	4	8	7	9	5	2	2
	72%	22%	78%	22%	44%	39%	50%	28%	11%	11%

*Miscellaneous category includes priority coastal training topics of intergovernmental cooperation, grant writing (North Carolina), public health (Old Woman Creek).

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II. Trends in Program Training Delivery and Formats

Table 6

Reserve	Method(s)
Ace Basin – SC	Workshop was the most frequent format; then conferences, courses, and field exercises
Delaware - DE	Field-based programs, continuing education courses, workshops, technical training programs
Elkhorn Slough - CA	Workshops, books, co-workers, non-governmental events, and professional meetings
Hudson River - NY	The preferred format is a training course or workshop followed by field exercises and professional conferences. Most respondents are not interested in satellite downlinks or traditional correspondence courses.
Jacques Cousteau - NJ	Specific one-on-ones, not individuals, but working directly with a municipality, as opposed to having a training offering on a general topic such as urban sprawl. Preferred formats were flip-flop field trips, continuing education courses, and workshops.
Jobos Bay - PR	Short term courses, short seminars, workshops, Internet (may be used in the future implementation of the CTP), lectures and workbooks (found to be least effective); field methods, demonstrations, round table discussions, case studies (highest effectiveness)
Kachemak Bay - AK	Workshops, conferences, and laboratory/field activities; The reserve also produces interactive video products based on CTP topics to be used as training tools and to expand the learning opportunities to other regions. It provides professional teacher development courses
Narragansett Bay - RI	Workshops, conferences; online training and distance learning were the least utilized methods
North Carolina - NC	Workshops, Internet-based training, technical publication series, and a Web presence that provides a “clearinghouse” of information
North Inlet-Winyah Bay - SC	Workshops, lecture, conferences, field exercises. Approach should move toward functional ecological units- complete watersheds; workshops preferred approach, demonstration is preferred delivery
Old Woman Creek - OH	Workshops, “close to home” venues for accessibility, half-day to one-day trainings; web-based clearinghouse needed
Padilla Bay - WA	Workshop, field exercise, conference, seminar. Initially thought they would be funders of others’ training, on a tiered funding approach, but have come to conduct or partner/provide all on their own. Need to expand collaborations because we’re “maxing out” on resources; every class is filled. Little interest in on-line learning, although want to register on-line.
Rookery Bay - FL	Documents do not contain this information
Sapelo Island - GA	Workshops, lectures, roundtable discussions, and demonstrations
South Slough - OR	Workshops – three informal, day-long events, lecture series; wetland restoration techniques course, seminars, issue papers, case histories, and other publications
Waquoit Bay - MA	Workshops, seminars, field courses, web-based information dissemination, one-to-one consultations, and demonstration projects
Weeks Bay - AL	Workshops and short lectures by expert speakers that incorporate hands-on activities, demonstrations, and fieldtrips
Wells - ME	Workshops, presentations or trainings were the most frequently cited training delivery methods; field based/on-site workshops were considered to be the most effective type of training

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Table 8

NERRS Program Training and Delivery Formats (by NOAA Regions)											
Reserve	Lectures	Web/ Online	Workshops	Conferences	Seminars	Courses (including cont ed)	Field Exercises / Trips	Demonstrations	Roundtable / Group Discussions	One-on-one consultations	Misc*
GULF REGION											
Jobos Bay – PR	X	X	X				X	X	X		X
Rookery Bay – FL**											
Weeks Bay – AL	X		X				X	X			X
GULF TOTAL	2	1	2	0	0	0	2	2	1	0	2
MID-ATLANTIC REGION											
Delaware – DE			X			X	X				X
Jacques Cousteau – NJ			X			X	X			X	
Old Woman Creek – OH			X								X
MID-ATLANTIC TOTAL	0	0	3	0	0	2	2	0	0	1	2
NORTHEAST REGION											
Hudson River – NY			X	X		X	X				
Narragansett Bay – RI		X	X	X							
Waquoit Bay – MA	X	X	X		X		X	X		X	X
Wells - ME			X				X				X
NORTHEAST TOTAL	1	2	4	2	1	1	3	1	0	1	2
PACIFIC REGION											
Eikhorn Slough – CA			X								X
Kachemak Bay – AK			X	X		X	X				X
Padilla Bay - WA			X	X	X		X	X			X
South Slough – OR	X		X		X	X					X
PACIFIC TOTAL	1	0	4	2	2	2	2	1	0	0	4

Trends Analysis of Coastal Training Programs of the National Estuarine Research Reserve System

NERRS Program Training and Delivery Formats (by NOAA Regions-continued)											
Reserve	Lectures	Web/ Online	Workshops	Conferences	Seminars	Courses (including cont ed)	Field Exercises / Trips	Demonstrations	Roundtable / Group Discussions	One-on-one consultations	Misc*
SOUTH EAST REGION											
Ace Basin – SC			X	X		X	X				
North Carolina – NC		X	X								X
North Inlet – Winyah Bay – SC	X		X	X			X	X			
Sapelo Island - GA	X		X					X	X		
SOUTH EAST TOTAL	2	1	4	2	0	1	2	2	1	0	1
	6	4	17	6	3	6	11	6	2	2	11
	33%	22%	94%	33%	17%	33%	61%	33%	11%	11%	61%

*Miscellaneous methods are specific to each reserve, and include technical training programs (Delaware); books (Elkhorn Slough); coworkers (Elkhorn Slough); non-governmental events (Elkhorn Slough); professional meetings (Elkhorn Slough); short term trainings (Jobos Bay, Old Woman Creek); case studies (Jobos Bay, South Slough); technical publication series (North Carolina); issue papers (South Slough); presentations (Wells); interactive videos as training tools (Kachemak Bay).

**Documents do not contain this information.

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III. Trends Among Target Audiences

Table 9

Reserve	Target Audience Identification
Ace Basin – SC	Community leaders (conservation organizations, county/city governments, refuge managers, environmental education groups, forest industry representatives, community associations, historical society officers, landowners).
Delaware - DE	Municipal/county officials (elected and appointed), volunteer organization personnel, business owners, federal/state agency personnel, professional association personnel, legislators.
Elkhorn Slough - CA	Regional planners and regulators.
Hudson River - NY	Land managers (scientific, natural resource, administrative/operational staff and volunteers of land trusts, nonprofit organizations, colleges, environmental organizations and historic mansions, and public land managers at the local, county, state/federal levels)..
Jacques Cousteau - NJ	Municipal officials (mayors, land use planners, zoning officials, environmental commissioners, planning board members); business organization representatives, K-12 educators, local government officials, state employees, professional association members, volunteer organization members.
Jobos Bay - PR	Rangers (DNER), communities and non-governmental organizations, users of coastal resources, government agency staff, municipal legislators, Department of Education teachers.
Kachemak Bay - AK	Land Use Planning: land use managers and planners; elected and volunteer policy makers. Natural Resource Management: fish and wildlife scientists and managers; Tribal/IRA councils and natural resource specialists; visitor services [i.e., ecotourism, charter guides].
Narragansett Bay - RI	Municipal volunteers and staff (members of conservation/harbor commissions, planning, economic development and zoning boards, municipal land trusts, school committees, Rhode Island councils, Massachusetts selectmen, planners, conservation agents, town clerks and managers).
North Carolina - NC	State/local elected officials, agency staff, volunteer boards, NGO's, landscapers, municipal officers, and real estate professionals.
North Inlet-Winyah Bay - SC	City/county elected and appointed officials and professionals (city/county council members, planning commission members, mayors, city/county administrators, staff).
Old Woman Creek - OH	Elected and appointed officials, local and state environmental agencies, land managers, NPOs, consultants.
Padilla Bay - WA	Local shoreline planners, local watershed planners, local natural resources staff, ecology shore lands permit reviewers, fish and wildlife area habitat biologists, PSAT local liaisons, tribal resource managers and planners, staff consultants/contractors, resource management staff and planners of federal agencies (EPA, US Army Corps of Engineers).
Rookery Bay - FL	Coastal regulatory/law enforcement officers, Southwest Florida planners and engineers.
Sapelo Island - GA	Elected and municipal officials.
South Slough - OR	Watershed councils/groups.
Waquoit Bay - MA	Local municipal officials (board members/city councilors, planning board members, health board members, conservation commission members, harbor/shellfish/marina commissions, waterways committees).
Weeks Bay - AL	Elected officials, public works staff, planners, engineers, and especially volunteers on decision-making boards.
Wells - ME	Municipal officials (town managers, selectmen, planners, code enforcement officers, planning boards, conservation commissions).

**Trends Analysis of Coastal Training Programs
of the National Estuarine Research Reserve System**

Table 10

NERRS Target Audiences															
Reserve	Elected/ Appointed Officials	Govt Personnel	Govt Agency	Environmental/ Conservation Orgs	Community Groups	Land Owners/ Managers	Volunteers	NGOs/ NPs	Business/ Professional	Bus/Prof Assns	Planners/ Planning	Science Community	Education Community	Regulatory/ Enforcement	Tribal
Ace Basin – SC		X	X	X	X	X		X	X	X					
Delaware – DE	X		X				X				X			X	
Elkhorn Slough – CA						X							X		
Hudson River – NY				X		X	X	X					X		
Jacques Cousteau – NJ	X	X					X			X	X		X		
Jobos Bay – PR	X		X		X										
Kachemak Bay – AK	X	X	X			X	X	X	X		X	X			X
Narragansett Bay – RI	X	X	X			X	X				X				
North Carolina – NC	X		X				X	X	X						
North Inlet-Winyah Bay – SC	X	X													
Old Woman Creek – OH	X		X			X		X	X						
Padilla Bay – WA			X						X		X	X		X	
Rookery Bay – FL									X		X			X	
Sepulo Island – GA	X														
South Slough – OR				X											
Waquoit Bay – MA	X						X				X				
Weeks Bay – AL	X										X				
Wells – ME	X										X			X	
	12	5	8	3	2	5	6	5	6	2	8	2	3	4	2
	67%	28%	44%	17%	11%	28%	33%	28%	33%	11%	44%	11%	17%	22%	11%

**Trends Analysis of Coastal Training Programs
of the National Estuarine Research Reserve System**

Table 11

NERRS Target Audiences (by NOAA Regions)															
Reserve	Elected/ Appointed Officials	Govt Personnel	Govt Agency	Environmental/ Conservation Orgs	Community Groups	Land Owners/ Managers	Volunteers	NGOs/ NPs	Business/ Professional	Bus/Prof Assns	Planners/ Planning	Science Community	Education Community	Regulatory/ Enforcement	Tribal
GULF REGION															
Jobs Bay – PR	X		X		X			X					X		
Rookery Bay – FL											X			X	
Weeks Bay – AL	X	X					X				X				
GULF TOTAL	2	1	1	0	1	0	1	1	0	0	2	0	1	1	0
MID-ATLANTIC REGION															
Delaware – DE	X		X				X		X	X					
Jacques Cousteau – NJ	X	X					X			X	X		X		
Old Woman Creek – OH	X		X			X		X	X						
MID-ATLANTIC TOTAL	3	1	2	0	0	1	2	1	2	2	1	0	1	0	0
NORTHEAST REGION															
Hudson River – NY				X		X		X					X		
Narragansett Bay – RI	X	X	X			X	X				X				
Waquoit Bay – MA	X														
Wells – ME	X										X			X	
NORTHEAST TOTAL	3	1	1	1	0	2	1	1	0	0	2	0	1	1	0
PACIFIC REGION															
Elkhorn Slough – CA											X			X	
Kachemak Bay – AK	X		X			X	X		X		X	X			X
Padilla Bay – WA			X						X		X	X		X	X
South Slough – OR				X											
PACIFIC TOTAL	1	0	2	1	0	1	1	0	2	0	3	2	0	2	2

**Trends Analysis of Coastal Training Programs
of the National Estuarine Research Reserve System**

NERRS Target Audiences (by NOAA Regions-continued)

Reserve	Elected/ Appointed Officials	Govt Personnel	Govt Agency	Environmental/ Conservation Orgs	Community Groups	Land Owners/ Managers	Volunteers	NGOs/ NPs	Business/ Professional	Bus/Prof Assns	Planners/ Planning	Science Community	Education Community	Regulatory/ Enforcement	Tribal
SOUTH EAST REGION															
Ace Basin – SC		X	X	X	X	X		X	X						
North Carolina – NC	X		X				X	X	X						
North Inlet-Winyah Bay – SC	X	X													
Sapelo Island – GA	X														
SOUTH EAST TOTAL	3	2	2	1	1	1	1	2	2	0	0	0	0	0	0
	12	5	8	3	2	5	6	5	6	2	8	2	3	4	2
	67%	28%	44%	17%	11%	26%	33%	26%	33%	11%	44%	11%	17%	22%	11%

IV. Trends in Training Needs as Identified by the NERRS Audiences

Table 12

Reserve	Audience Needs
Ace Basin – SC	Various incentives for attendance of a training session that were deemed important included expert speakers, convenient times, and easy access to the training event.
Delaware - DE	Training topics addressing water resources (quantity and quality); land-use planning, wetlands, and waterways; environmental aspects of land use, buffers; habitat fragmentation, protection and restoration.
Elkhorn Slough - CA	Attendees most preferred to interact with other agency personnel, environmental non-governmental organizations, environmental consultants, farmers, and people within own agency. Audiences want to interact and network.
Hudson River - NY	Integrating science into land management decision-making; understanding and complying with government regulations; identifying and controlling invasive species; managing the shoreline; increasing awareness of the importance of the estuary; and protecting the watershed.
Jacques Cousteau - NJ	Training topics addressing wetlands and the impacts of human disturbance on New Jersey estuaries.
Jobos Bay - PR	Audiences want to build skills within certain topical areas. Training topics addressing sustainable development, coastal zone planning, coastal resource management, tourism, urban sprawl, social processes in the coastal zone.
Kachemak Bay - AK	Audiences want to build skills within certain topical areas. Training topics addressing science activities/curriculum design; habitat protection/restoration; coastal stewardship; beach and near shore ecology; endangered species.
Narragansett Bay - RI	Not as many target audience members wanted hands-on, interactive programming as was first thought; it depended upon the type of audience. Some felt overburdened with workshops.
North Carolina - NC	Training topics addressing Phase II stormwater regulations; intergovernmental communication, such as on the cumulative impacts of development; web-based GIS training.
North Inlet-Winyah Bay - SC	Audiences want science-based training; want to integrate with site-based K-12 education; training topics on stormwater management decision-making. Neighborhood communication on residential development (goal, not stated need).
Old Woman Creek - OH	Audiences want training from experienced providers with hands-on experience, not neophytes; coordinated training; clearinghouse for information dissemination/retrieval and promotion of such availability; use of new communication technologies.
Padilla Bay - WA	Need for understanding by public officials of their role and impact in coastal zone management by their daily decisions; need for a listserve and email communication.
Rookery Bay - FL	Audience wanted face to face workshops not distance learning or cd-rom based opportunities; future update of needs assessment to tailor format for target groups; class and field activities; group interaction and problem solving. Want certification and continuing education credits as top incentives for training. CTI should expand training of coastal law enforcement to state wide. Target new training topics to areas of most interest to target audience and topics they know least; public education methods as training topics.
Sapelo Island - GA	Most important issues to be addressed are water quality/quantity and best management practices. Decision-makers need to understand the “science” of water issues and long-term impacts. Attendees appreciated the opportunities for collaboration among audience members and collaboration among groups with similar goals. The challenge in getting politicians to attend training events is apparent.

**Trends Analysis of Coastal Training Programs
of the National Estuarine Research Reserve System**

TRAINING NEEDS AS IDENTIFIED BY THE NERRS AUDIENCES (continued)	
R	Audience Needs
South S	Watershed councils need information and technical assistance on topics, and more about how to plan and monitor projects, as well as analyze the costs/benefits of restoration treatments. Need to understand the role of tidal hydrology and how anadromous fish use estuaries. Community groups co
Waquoit Bay - MA	Need for training focused at the local level between trainers and trainees, such as more time for questions and answers; more of an attempt to get target audience to attend training; a consolidation of federal, state, local programming efforts.
Weeks Bay - AL	Training topics needed are coastal resources and ecosystems for land developers; alternative methodologies and their costs; economic realities of environmental programs; regulatory compliance, public health, eco-tourism; cumulative impact of decisions. Need coordination among coastal players; need coordination and partnerships.
Wells - ME	wetlands, marshes, vernal pools; use of best management practices for water quality protection. Need for collaboration with communities and other groups providing training; need for science based information and technology relevant to coastal stewardship.

Trends Analysis of Coastal Training Programs of the National Estuarine Research Reserve System

Table 13

Reserve	Training Needs as Identified by the NERRS Audiences									
	Incentives**	Specific Training Topics Offered	Integrating Science into Practice	Build Professional Skills	Science Based Training	Interaction/Networking	Technical Assistance/Communication Technologies	Coordination/Collaboration/Clearinghouse	Misc*	
Ace Basin – SC	X									
Delaware – DE		X								
Elkhorn Slough – CA						X				
Hudson River – NY		X	X							
Jacques Cousteau – NJ		X								
Jobos Bay – PR		X		X						
Kachemak Bay – AK		X		X						
Narragansett Bay – RI										
North Carolina – NC		X					X			
North Inlet – Winyah Bay – SC		X			X		X	X		X
Old Woman Creek – OH										
Padilla Bay – WA		X					X			
Rookery Bay – FL	X	X				X				X
Sapelo Island - GA		X			X	X				
South Slough – OR		X					X			
Waquoit Bay – MA		X				X				
Weeks Bay – AL		X								
Wells - ME	3	X			X			X		
	17%	14	1	2	3	4	5	3	2	
		78%	6%	11%	17%	22%	28%	17%	11%	

** Incentives for attendance include expert speakers, convenient times, easy access to the training event, certification, and continuing education credits.

* Miscellaneous training needs include field activities (Rookery Bay); integrate with site based K-12 education (North Inlet-Winyah Bay).

Trends Analysis of Coastal Training Programs of the National Estuarine Research Reserve System

Table 14 Training Needs as Identified by the NERRS Audiences (By NOAA Regions)

Reserve	Incentives**	Specific Training Topics Offered	Integrating Science into Practice	Build Professional Skills	Science Based Training	Interaction/Networking	Technical Assistance/Communication Technologies	Coordination/Collaboration/Clearinghouse	Misc*
GULF REGION									
Jobs Bay – PR		X		X					
Rookery Bay – FL	X	X				X			X
Weeks Bay – AL		X						X	
GULF TOTAL	1	3	0	1	0	1	0	1	1
MID-ATLANTIC REGION									
Delaware – DE		X							
Jacques Cousteau – NJ		X							
Old Woman Creek – OH	X						X	X	
MID-ATLANTIC TOTAL	1	2	0	0	0	0	1	1	0
NORTHEAST REGION									
Hudson River – NY		X	X						
Narragansett Bay – RI		X							
Waquoit Bay – MA		X				X	X		
Wells – ME		X			X			X	
NORTHEAST TOTAL	0	3	1	0	1	1	1	1	0
PACIFIC REGION									
Elkhorn Slough – CA						X			
Kachemak Bay – AK		X		X					
Padilla Bay – WA		X					X		
South Slough – OR		X					X		
PACIFIC TOTAL	0	3	0	1	0	1	2	0	0
SOUTH EAST REGION									
Ace Basin – SC	X								
North Carolina – NC		X					X		
North Inlet – Winyah Bay – SC		X			X				X
Sapelo Island – GA		X			X	X			
SOUTH EAST TOTAL	1	3	0	0	2	1	1	0	1
TOTAL									
	3	14	1	2	3	4	5	3	2
	17%	78%	6%	11%	17%	22%	28%	17%	11%

** Incentives for attendance include expert speakers; convenient times; easy access to the training event; certification, and continuing education credits.
* Miscellaneous training needs include field activities (Rookery Bay); integrate with site based K-12 education (North Inlet-Winyah Bay)

***Trends Analysis of Coastal Training Programs
of the National Estuarine Research Reserve System***

V. Trends in Partnerships and Collaborations

Table 15

Reserve	Identified Partners
Ace Basin – SC	South Carolina Sea Grant Consortium, Clemson University Extension Program, NOAA Coastal Services Center, Local branches of the University of South Carolina (Beaufort, Salkehatchie, Orangeburg).
Delaware - DE	Delaware Coastal Zone Management Program (a federal/state partnership housed within NOAA), Delaware Department of Natural Resources and Environmental Control, the University of Delaware (Sea Grant Program), and Delaware State University.
Elkhorn Slough - CA	NOAA, Elkhorn Slough Foundation, California Department of Fish and Game are current partners. Informal training partners are California Coastal Commission, California Coastal Conservancy, California State University Monterey Bay, Monterey Bay Aquarium, Monterey Bay National Marine Sanctuary, Monterey County Department of Planning and Building Inspection, Monterey County Resource Conservation District. Anticipated partnerships include California Department of Water Resources, Moss Landing Duke Power Plant, Moss Landing Harbor District, San Benito County Planning and Building Department, Santa Clara County Planning Department, Santa Cruz County Planning Department, Santa Cruz Resource Conservation District, University of California at Santa Cruz, University of California Cooperative Extension, US Army Corps of Engineers, US Department of Agriculture Natural Resource Conservation Service, US Department of Interior Fish and Wildlife Service, Wildland Restoration Team.
Hudson River - NY	NYS Department of Environmental Conservation, Hudson River Estuary Program, NYS Department of State Division of Coastal Resources, Hudson River Valley Greenway, NY Sea Grant, Cornell University, and NYS Office of Parks, Recreation and Historic Preservation.
Jacques Cousteau - NJ	Working with Rutgers Office of Continuing Education to deliver technical training programs to NJ's coastal management community. An emerging relationship with New Jersey's Ocean Planning Department, along with assistance from the Barnegat Bay Estuary Program has been developed to help target outreach. Want to work more closely with the Division of Watershed Management.
Jobos Bay - PR	Current partners are Sea Grant program at the University of Puerto Rico, Department of Natural and Environmental Resources (PR CZM Program and Bureau of Coasts, Reserves, and Refuges). Future partners include Water Resources Institute from the UPR-Mayaguez, Inter-American University of PR Center for Environmental Education, Metropolitan University School of Environmental Sciences, Center for Hemispheric Cooperation from UPR-Mayaguez, Agricultural Extension Service from UPR-Mayaguez, College of Agricultural Sciences of UPR-Mayaguez, San Juan Bay Estuary Program, Environmental NGO Fundacion Marti Coll, US Department of Agriculture Natural Resources Conservation Service.
Kachemak Bay - AK	The Kenai River Center, EPA, and the Kenai Peninsula Borough Coastal Management Program. Additional potential partners include the Alaska National Maritime Refuge, Sea Grant Development, Cook Inlet Regional Citizens Commission, and the Alaska Ocean Observing System.
Narragansett Bay – RI	Core CTP partners are Rhode Island Sea Grant, US EPA Region I. New partner is Rhode Island Association of Conservation Commissions. Partners provide facilities, instructors, technology, and/or technological expertise, marketing assistance. Future partnering plans include sharing and posting information via web with other agencies/organizations, and sponsorship of other agency/organization training programs and outreach efforts.
North Carolina - NC	NOAA, North Carolina Coastal Non-point Source Program, Albemarle-Pamlico National Estuary Program, North Carolina Department of Environment and Natural Resources, North Carolina State University, University of North Carolina at Wilmington, University of North Carolina at Chapel Hill, Duke University, Marine Graphics, and the Eastern Carolina Council of Governments.

**Trends Analysis of Coastal Training Programs
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PARTNERSHIPS AND COLLABORATIONS (continued)	
Reserve	Identified Partners
North Inlet-Winyah Bay - SC	th and Environmental Control Office of Ocean and Coastal Resource Management, SC Sea Grant Consortium, NOAA Coastal Services Center. Anticipated partnerships include University of SC Center for Environmental Policy, US Fish and Wildlife Service, Clemson Extension Service. Also locally based citizen action groups, conse goal is to broaden stakeholder partnerships. Shared Advisory Board with ACE Basin NERR; staff is Chair. Advice to the CTP
Old Woman Creek - OH	Program. Anticipated partnerships include Soil and Water Conservation Districts, US Army Corps of Engineers, Ohio State University Agricultural Extension Service, Ohio EPA.
Padilla Bay - WA	Action Team. Anticipated partnerships include Ecology/Shore lands and Coastal Management Office, Puget Sound Water Quality Action Team, Washington Sea Grant, Office of Community Development.
Rookery Bay - FL	partnerships are National Audubon Society and Audubon of FL, City of Naples, Collier County, The Conservancy of Southwest FL, FL Coastal Management Program, FL Department of Environmental Protection, FL Fish and Wildlife Conservation Commission, FL Gulf Coast University, South FL Water Management District, US Fish and Wildlife Service. Anticipated partnerships include FL Keys National Marine Sanctuary, FL Sea Grant, The Nature Conservancy, NOAA Coastal Services Center, West Coast Inland Navigation District, Florida Institute of Oceanography, Council for Sustainable Florida, University of Florida TREEO Center.
Sapelo Island - GA	University of GA Marine Extension. New partners are DNR Environmental Protection Division, The Georgia Conservancy, and NOAA Gray's Reef National Marine Sanctuary. Partners provide training facilities, instructors/specialists with expertise, technology and/or technological expertise, marketing/advertising expertise, staff people to help make arrangements for training. Anticipated partners are the nearby NERRS in North and South Carolina, Altamaha Riverkeeper, McIntosh Sustainable Environment and Economic Development, Adopt-A-Stream, Adopt-A-Wetland, Tybee Island Marine Science Center, Savannah Metropolitan Planning Commission, the University of Georgia Marine Education Center and Aquarium,
South Slough - OR	Tillamook County Performance Partnership and the Oregon Coastal Environments Awareness Network (OCEAN); Emerging partnerships include the Oregon Invasive Species Council (Education and Outreach subcommittee), Coos County Weed Advisory Board (education subcommittee), the Oregon International Port of Coos Bay, and the Oregon State University Extension Sea Grant/Watershed Stewards Education Program.
Waquoit Bay - MA	Sea Grant Program. Other partners are the Association to Preserve Cape Cod, Cape Cod Commission, homebuilders and realtors, many towns and municipalities, and several others depending on the topic being addressed. Future partners include UMASS Boston, MIT Sea Grant, Mass Bays Program, Buzzards Bay Program, MA Association of Conservation Commissioners, Cape Cod Community College, MA Maritime Academy.
Weeks Bay - AL	Potential collaboration opportunities between the Weeks Bay NERR and the Mississippi coastal Grand Bay NERR are being explored. There is also potential to enhance and strengthen existing training partnerships between federal, state and local agencies and organizations along the central Gulf coast. Other training providers and potential partners include the Alabama Coastal Foundation, the Alabama Cooperative Extension-Baldwin County, Alabama Department of Environmental Management, Auburn Marine Extension and Research Center, Baldwin County Health Department, Dauphin Island Sea Lab, Mississippi-Alabama Sea Grant Extension, Mobile Bay National Estuary Program, NRCS-Baldwin County, South Alabama Regional Planning Commission, Weeks Bay Reserve Foundation, and the Weeks Bay Watershed Project.

***Trends Analysis of Coastal Training Programs
of the National Estuarine Research Reserve System***

PARTNERSHIPS AND COLLABORATIONS (continued)	
Reserve	Identified Partners
Wells - ME	Primary partners are Laudholm Trust, Maine Coastal Program, Maine Sea Grant, Southern Maine Regional Planning Commission. Partnerships will be expanded to include groups with expertise and interests to targeted training opportunities.

**Trends Analysis of Coastal Training Programs
of the National Estuarine Research Reserve System**

Table 16

NERRS Partnerships and Collaborations											
Reserve	Core Partners	Other Federal, State or Local Govt Agencies	Nonprofits	Colleges/ Universities	Foundations	City/County Departments	Planning/ Regulatory Commissions	Local/State/ Federal Govt Programs/ Partnerships	Businesses/ Professional Assn	NERRs	
Ace Basin – SC	X	X		X							
Delaware – DE	X	X		X							
Elkhorn Slough – CA	X	X	X	X	X	X	X				
Hudson River – NY	X	X	X	X							
Jacques Cousteau – NJ	X	X		X							
Jobos Bay – PR	X										
Kachemak Bay – AK	X	X						X			
Narragansett Bay – RI	X		X								
North Carolina – NC	X	X	X	X					X		
North Inlet – Winyah Bay – SC	X									X	
Old Woman Creek – OH	X										
Padilla Bay – WA	X	X									
Rookery Bay – FL	X	X	X	X				X			
Sapelo Island - GA	X	X		X							
South Slough – OR	X	X	X					X			
Waquoit Bay – MA	X		X				X	X	X		
Weeks Bay – AL	X	X	X	X	X		X			X	
Wells - ME	X		X			X	X				
	18	12	9	9	2	2	4	4	2	2	
	100%	67%	50%	50%	11%	11%	22%	22%	11%	11%	

**Trends Analysis of Coastal Training Programs
of the National Estuarine Research Reserve System**

Table 17

NERRS Partnerships and Collaborations (by NOAA Regions)										
Reserve	Core Partners	Other Federal, State or Local Govt Agencies	Nonprofits	Colleges/ Universities	Foundations	City/County Departments	Planning/ Regulatory Commissions	Local/State/ Federal Govt Programs/ Partnerships	Businesses/ Professional Assn	NERRs
GULF REGION										
Jobos Bay – PR	X									
Rookery Bay – FL	X	X	X	X				X		
Weeks Bay – AL	X	X	X	X	X		X			X
GULF TOTAL	3	2	2	2	1	0	1	1	0	1
MID-ATLANTIC REGION										
Delaware – DE	X	X		X						
Jacques Cousteau – NJ	X	X		X						
Old Woman Creek – OH	X									
MID-ATLANTIC TOTAL	3	2	0	2	0	0	0	0	0	0
NORTHEAST REGION										
Hudson River – NY	X	X	X	X						
Narragansett Bay – RI	X		X							
Wequott Bay – MA	X		X				X	X	X	
Wells – ME	X		X			X	X			
NORTHEAST TOTAL	4	1	4	1	0	1	2	1	1	0
PACIFIC REGION										
Elkhorn Slough – CA	X	X	X	X	X	X	X			
Kachemak Bay – AK	X	X						X		
Padilla Bay – WA	X	X								
South Slough – OR	X	X	X					X		
PACIFIC TOTAL	4	4	2	1	1	1	1	2	0	0

**Trends Analysis of Coastal Training Programs
of the National Estuarine Research Reserve System**

Reserve	NERRS Partnerships and Collaborations (by NOAA Regions-continued)										
	Core Partners	Other Federal, State or Local Govt Agencies	Nonprofits	Colleges/ Universities	Foundations	City/County Departments	Planning/ Regulatory Commissions	Local/State/ Federal Govt Programs/ Partnerships	Businesses/ Professional Assn	NERRs	
SOUTH EAST REGION											
Ace Basin – SC	X	X		X							
North Carolina – NC	X	X	X	X					X		
North Inlet – Winyah Bay – SC	X									X	
Sapelo Island - GA	X	X		X							
SOUTHEAST TOTAL	4	3	1	3	0	0	0	0	1	1	
	18	12	9	9	2	2	4	4	2	2	
	100%	67%	50%	50%	11%	11%	22%	22%	11%	11%	

***Trends Analysis of Coastal Training Programs
of the National Estuarine Research Reserve System***

VI. Trends with Regional Training Providers and Regional Training Opportunities

Table 18

Reserve	Training Providers and Opportunities
Ace Basin – SC	<p>Current training providers: colleges/universities, SC DNR, NERRs, Sea Grant.</p> <p>There is a statewide need for coordination among training providers. If more opportunities are needed for decision-makers to attend training, then materials presented in occasional large workshops might be better presented in many smaller, local discussion groups or at routine meetings of local organizations. Regional partnering occurring through development of Market Analysis; regional Market Analysis survey as a collaborative approach to a coordinated needs analysis with Sapelo Island, North Inlet-Winyah Bay, and ACE NERRs.</p> <p>Training opportunities noted: need more of a focus on training for general public; more research translation for decision-makers; better statewide coordination among training providers; more opportunities to attend training; more follow-up after training events; more efforts to target elected officials.</p>
Delaware - DE	<p>Other types of coastal training activities in the state, such as NEMO, that the Reserve is examining; Reserve would like to focus on similar issues. There is potential for sharing resources within the state and partnering across the state.</p>
Elkhorn Slough - CA	<p>Some anticipated partnerships include national partners such as Army Corps of Engineers, NRCS, Fish and Wildlife; some anticipated partnerships include regional universities.</p> <p>Training opportunities noted: need for training events conducted by federal agency biologists and/or independent biological consultants; need for copies of published, peer-reviewed papers and written abstracts of presentations during workshops (valuable information not gained through brochures and fliers); desire experienced instructors.</p>
Hudson River - NY	<p>Current training providers: nonprofit organizations, governments/agencies, continuing/post secondary education, and businesses.</p> <p>Training opportunities noted: recreational topics (ecotourism, boater impacts on waterways, human impacts on trails) and waterfront topics (global climate change, sea level rise, harbor management, shoreline engineering).</p>
Jacques Cousteau - NJ	<p>Current training providers: Core partners, federal/state agencies, nonprofits.</p> <p>Regional providers/opportunities: Want to expand present geographic scope from multi-county to entire state of NJ.</p> <p>Opportunity: Municipal community faces constrained time and transitions in positions. JC NERR will tailor training events that can be delivered over short time frames and are easily repetitious to educate new officials as they are elected. Also working on developing web-based professional development program for NJ coastal managers; development of interactive website.</p>
Jobos Bay - PR	<p>Current training providers: Universities are main provider of courses/training activities (most consists of formal academic courses in degree programs); DNR, federal agencies. Sea Grant, NOAA and other federal agencies more flexible in designing and implementing training courses versus colleges/universities.</p> <p>Regional providers: Fundacion Marti Coll (devoted to ecological tourism); Department of Marine Sciences at University of PR; DNER's Bureau of Coasts, Reserves and Refuges; School of Environmental Affairs from Universidad Metropolitana.</p>
Kachemak Bay - AK	<p>Current training providers: various governmental agencies, nonprofits, educational institutions, for-profits, tribal affiliated organizations. Regional opportunities explored through anticipated/future partners: US Fish and Wildlife, state recreation and tourism, Soil and Water Conservation District, Natural Resource Conservation Service, Sea Grant, US Geological Survey, colleges/universities.</p>

**Trends Analysis of Coastal Training Programs
of the National Estuarine Research Reserve System**

NERRS REGIONAL TRAINING PROVIDERS & OPPORTUNITIES (continued)	
Reserve	Training Providers and Opportunities
Narragan Bay - RI	state government agencies, quasi-state government agencies, municipal agencies/departments, educational institutions, nonprofit organizations, for-profit businesses. Regional providers/opportunities: Partnering with RI Association of Conservation Commissions and the MA Association of Conservation Commissions to improve members' decision-making ability relevant to use and m developing interactive website.
Carolina - NC	Current training providers: Many university-based affiliates, but not specified. Regional providers/opportunities: Colleges/universities, NC Wildlife Resources Commission, national estuary program, NC League of Women Voters, regional/state nonprofits.
North Inlet-Winyah Bay - SC	community groups that work with locals and city officials, professionals. Federal, state and higher education providers are all "regional" here because shared by ACE Basin and NIWB NERRs. Regional providers/opportunities: Through anticipated/future partners-US Fish and Wildlife, Extension service, citizen action groups, conservation nonprofits, sportsmen's associations.
Old Woman Creek - OH	Regional providers/opportunities: Opportunity for Reserve to facilitate coordination among state training providers relevant to course content, program goals/objectives of the training market relevant to instructor expertise, costs/resource sharing, certification; geographically to balance location of training, marketing training events, disseminating information.
Padilla Bay - WA	Current training providers: Reserve, DNR, colleges/universities, federal/state agencies, Sea Grant, Extension service. Regional providers/opportunities: Through anticipated/future partners-Ecology, Shorelands and Environmental Assistance Program, Puget Sound Water Quality Action Team, WA Sea Grant, WA Office of Community Development. Opportunities: Collaborate with instructors from partners and other training entities; refine training to "hot" topics; coordinate training to variety of locations to increase accessibility to participants; improved publicizing of training events.
Rookery Bay - FL	universities identified; new groups emerging that will have to be included. Regional providers/opportunities: Training providers tend to target limited professional audiences; need to expand training events to additional audiences. Topics needing to be addressed are also not being addressed by other training providers. Anticipated/future partnerships will help to address these issues-FL Keys National Marine Sanctuary, FL Sea Grant, The Nature Conservancy, NOAA Coastal Services Center.
Sapelo Island - GA	developers, realtors, land or estuary based offshore groups, coastal or deep water groups (those doing research in deeper water offshore), and commercial or recreational fishing audiences because didn't think of them as needing environmental education. Regional providers/opportunities: The opportunities exist for collaboration with North Inlet Winyah Bay NERR and ACE Basin NERR for training, and on policy and procedure for the coastal training program. The three Reserves collaborated on the survey design for the market analysis and needs assessment phases of their CTPs. Want to include partners in Atlanta because those who control the resources are based in Atlanta.
South Slough	Current training providers: Community colleges/universities, federal/state agencies, local/regional partnerships (public/private or cross-jurisdictional public), non-governmental organizations, private entities, professional associations, tribal organizations. Regional providers/opportunities: Opportunities through partnerships.

**Trends Analysis of Coastal Training Programs
of the National Estuarine Research Reserve System**

NERRS REGIONAL TRAINING PROVIDERS & OPPORTUNITIES (continued)	
Reserve	Training Providers and Opportunities
Waquoit Bay - MA	<p>Current training providers: Core partners, state/government agencies, nonprofits, local community, recreational, higher education, for-profits.</p> <p>Regional providers/opportunities: Through anticipated/future partnerships with UMASS Boston, MIT Sea Grant, Mass Bays Program, Buzzards Bay Program, MA Association of Conservation Commissioners. Some higher ed institutions have indicated an interest in partnerships for non-degree training, including Cape Cod Community College and MA Maritime Academy.</p>
Weeks Bay - AL	<p>Current training providers: Core partners, state/federal agencies, nonprofits.</p> <p>Regional providers/opportunities: Potential for collaboration between Weeks Bay and Grand Bay NERR on Mississippi coast, which is also developing coastal training program. Also through anticipated/future partners-Alabama Coastal Foundation, Alabama Extension Service, Faulkner State Community College (Fairhope campus), Grassroots, Inc.</p>
Wells - ME	<p>Current training providers: Core partners; conservation, environmental and planning organizations; state/federal agencies.</p> <p>Regional providers/opportunities: Opportunities through anticipated/future partners.</p>

**Trends Analysis of Coastal Training Programs
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Table 19

Reserve	NERRS Regional Training Providers								Community Groups	Misc*
	Colleges/ Universities	NGOs/ NPs	Businesses	Govt Agencies	Core Partners	Govt Agencies	Businesses	Colleges/ Universities		
Ace Basin – SC	X				X					
Delaware – DE				X						
Elkhorn Slough – CA					X					
Hudson River – NY	X	X	X	X	X					
Jacques Cousteau – NJ		X		X	X					
Jobs Bay – PR	X	X		X	X					
Kachemak Bay – AK	X	X		X	X				X	
Narragansett Bay – RI	X	X	X	X	X					
North Carolina – NC	X				X					
North Inlet – Winyah Bay – SC	X	X		X	X			X		
Old Woman Creek – OH		X	X	X	X					
Padilla Bay – WA	X			X	X					
Rookery Bay – FL	X	X		X	X					
Sapelo Island - GA	X	X		X	X					
South Slough – OR	X	X	X	X	X				X	
Waquoit Bay – MA	X	X		X	X			X		
Weeks Bay – AL		X		X	X					
Wells - ME		X		X	X					
	12	13	4	14	18			2	4	
	67%	72%	22%	78%	100%			11%	22%	

* Miscellaneous training providers include professional associations (Kachemak Bay, South Slough), tribal organizations (Kachemak Bay, South Slough), recreational (Waquoit Bay), environmental and planning organizations (Wells); for-profits (Kachemak Bay, Waquoit Bay).

**Trends Analysis of Coastal Training Programs
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Table 20

NERRS Regional Training Providers (by NOAA Regions)									
Reserve	Colleges/ Universities	NGOs/ NPs	Businesses	Govt Agencies	Core Partners	Community Groups	Misc*		
GULF REGION									
Jobos Bay – PR	X	X		X	X				
Rookery Bay – FL	X	X			X				
Weeks Bay – AL		X		X	X				
GULF TOTAL	2	3	0	2	3	0	0	0	0
MID-ATLANTIC REGION									
Delaware – DE				X	X				
Jacques Cousteau – NJ		X		X	X				
Old Woman Creek – OH		X	X	X	X				
MID-ATLANTIC TOTAL	0	2	1	3	3	0	0	0	0
NORTHEAST REGION									
Hudson River – NY	X	X	X	X	X				
Narragansett Bay – RI	X	X	X	X	X				
Waquoit Bay – MA	X	X		X	X	X			X
Wells - ME		X		X	X				X
NORTHEAST TOTAL	3	4	2	4	4	1	2	2	2
PACIFIC REGION									
Elkhorn Slough – CA					X				
Kachemak Bay – AK	X	X		X	X				X
Padilla Bay – WA	X			X	X				
South Slough – OR	X	X	X	X	X				X
PACIFIC TOTAL	3	2	1	3	4	0	2	2	2

**Trends Analysis of Coastal Training Programs
of the National Estuarine Research Reserve System**

NERRS Regional Training Providers (by NOAA Regions – continued)							
Reserve	Colleges/ Universities	NGOs/ NPs	Businesses	Govt Agencies	Core Partners	Community Groups	Misc*
SOUTHEAST REGION							
Ace Basin – SC	X				X		
North Carolina – NC	X				X		
North Inlet – Winyah Bay – SC	X	X		X	X	X	
Sapelo Island - GA	X	X		X	X		
SOUTHEAST TOTAL	4	2	0	2	4	1	0
	12	13	4	14	18	2	4
	67%	72%	22%	78%	100%	11%	22%

* Miscellaneous training providers include professional associations (Kachemak Bay, South Slough), tribal organizations (Kachemak Bay, South Slough), recreational (Waquoit Bay), environmental and planning organizations (Wells), for-profits (Kachemak Bay, Waquoit Bay).

**Trends Analysis of Coastal Training Programs
of the National Estuarine Research Reserve System**

VII. Trends in CTP Monitoring and Evaluation Strategies

Table 21

Reserve	Method(s)
Ace Basin – SC	Workshop attendance tracking system (MS Access database); annual program evaluation by outside communications experts; training event evaluations by decision-makers; develop questions directed at decision-makers for periodic presentation in special section of newsletter followed by evaluation of that communication method; analyze standardized questions at end of decision-maker training events and follow-up with phone interviews; annual regional critique to review standardized survey of participants for evaluation; annual summary report of internal/external evaluations.
Delaware - DE	Strategic Plan not yet completed at time of document review or interview.
Elkhorn Slough - CA	Specific criteria used to evaluate the quality of the ESNERR CTP will be to annually summarize workshops, the number of organizations, self reported evaluations, and the percent of the program funded by sources other than NOAA.
Hudson River - NY	Strategic Plan not yet completed at time of document review or interview.
Jacques Cousteau - NJ	Numbers of registrations for programs/workshops, website hits, inquiries based on mailings and interest in training events, phone and email follow-up to a targeted mailing or brochure, surveys.
Jobos Bay - PR	Continuous assessment of training and needs through questionnaires at the end of each workshop; assess training through written evaluations by people attending the training; assessing the implementation of the objectives and programs through a structured assessment program; use of the JBNERR-CTP website as an evaluation tool; JBNERR CTP progress reports of internal and external evaluations.
Kachemak Bay - AK	Will develop a suite of evaluation techniques to monitor and measure improved decisions made, user behavioral changes, and the transfer of information learned to others. Methods are to identify the number of participants attending a training event, number of technical bulletins or newsletters, or number of website hits; clippings, informal interviews with past participants of training programs, or comments made in response to website questions; survey training participants directly through evaluations at the end of training events, focus groups, performance based measures, or asking participants how they intend to use the training information; a longitudinal study of a target audience to determine if training resulted in enhanced decision-making, improved user behavior, transfer of information to others, or implementation of innovative/effective techniques and technologies.
Narragansett Bay – RI	Paper surveys, phone interviews, counting website hits, number of participants attending training event, number of products (fact sheets, brochures) requested, newspaper clippings.
North Carolina - NC	Exit survey forms, attendance lists, number of technical bulletins/brochures ordered, future needs assessments, focus groups, newspaper clippings.
North Inlet-Winyah Bay - SC	Regular strategic planning meetings among CTP staff to review training targets, topics, strategies; annual programmatic evaluation by outside consultants; regular input from program partners, CTP Coordinating Committee, and CTP Advisory Board; continued development and revision of program performance measures that are consistent with NERR system guidelines. Products are tracking of cumulative number of training hours; analysis of training attendance records; tracking of participant return and referral rates; participant evaluations; comparison of audience goals for training with post-training perceptions; focus groups; assessment of specific performance measures.
Old Woman Creek - OH	Strategic Plan not complete at time of document review or interview. To be implemented as a strategic goal incorporating a core curriculum with established quality standards.
Padilla Bay - WA	Training event evaluation form, follow-up phone surveys, focus groups.

**Trends Analysis of Coastal Training Programs
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NERRS CTP MONITORING & EVALUATION STRATEGIES (continued)	
Reserve	Method(s)
Rookery Bay - FL	intermediate, and long-term impacts of CTP. sure immediate,
Sapelo Island - GA	Feedback from participants and program partners through surveys and follow-up correspondence; evaluations a nal resources and training inquiries; implement NOAA performance measu ria; conduct market analysis every 2-3 years; conduct needs assessment every 2 years.
South Slough - OR	these performance measures to the SS CTP audiences.
Waquoit Bay - MA	
Weeks Bay - AL	Evaluation of workshops by participants re: knowledge, understanding, collaborations, satisfaction with workshops; evaluation of program success by coordinator; evaluation of adoption of new information to professional practice by workshop attendees.
	Participants will complete written evaluation questionnaires following training events. To determine if training has resulted in implementation of ideas, techniques, and skills on the job, follow-up evaluations will be conducted in the form of Internet surveys, phone interviews, or focus groups.

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Table 22

Reserve	NERRS CTP Monitoring & Evaluation Strategies												
	Perf Measures	Attendance Tracking System	External Evals/Studies	Specific Event Evals	Web/Online	Surveys (all types)	Interviews (phone/in-person)	Staff/Partners	Media	Progress Reports/Annual Reports	Mailings	Focus Groups	Inquiries
Ace Basin – SC		X	X	X		X	X			X			
Delaware – DE													
Elkhorn Slough – CA		X		X						X			
Hudson River – NY													
Jacques Cousteau – NJ		X			X	X	X				X		X
Jobs Bay – PR	X		X	X	X	X			X				
Kachemak Bay – AK	X	X	X	X	X	X		X			X		
Narragansett Bay – RI		X			X	X		X					
North Carolina – NC		X	X			X		X			X		X
North Inlet – Winyah Bay – SC	X	X	X	X								X	
Old Woman Creek – OH													
Padilla Bay – WA						X						X	
Rookery Bay – FL	X			X									
Sapelo Island - GA	X		X	X		X							X
South Slough – OR	X			X		X							
Waquoit Bay – MA				X			X					X	
Weeks Bay – AL			X	X									
Wells - ME	6	7	7	X	4	10	7	1	3	3	4	6	2
	33%	39%	39%	67%	22%	56%	39%	6%	17%	17%	22%	33%	11%

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Table 23

Reserve	NERRS CTP Monitoring & Evaluation Strategies (by NOAA Regions)												
	Perf Measures	Attendance Tracking System	External Evals/Studies	Specific Event Evals	Web/Online	Surveys (all types)	Interviews (phone/in-person)	Staff/Partners	Media	Progress Reports/Annual Reports	Mailings	Focus Groups	Inquiries
GULF REGION													
Jobs Bay – PR	X		X	X	X	X				X			
Rookery Bay – FL	X			X									
Weeks Bay – AL			X	X									
GULF TOTAL	2	0	2	3	1	1	0	0	0	1	0	0	0
MID-ATLANTIC REGION													
Delaware – DE													
Jacques Cousteau – NJ		X			X	X	X				X		X
Old Woman Creek – OH													
MID-ATLANTIC TOTAL	0	1	0	0	1	1	1	0	0	0	1	0	1
NORTHEAST REGION													
Hudson River – NY													
Narragansett Bay – RI		X			X	X	X	X		X			
Waquoit Bay – MA				X			X					X	
Wells - ME				X		X	X					X	
NORTHEAST TOTAL	0	1	0	2	1	2	3	0	1	0	1	2	0
PACIFIC REGION													
Elkhorn Slough – CA		X		X						X			
Kachemak Bay – AK	X	X	X	X	X	X	X	X			X	X	
Padilla Bay – WA				X		X	X					X	
South Slough – OR				X		X							
PACIFIC TOTAL	2	2	1	4	1	3	2	0	1	1	1	2	0

**Trends Analysis of Coastal Training Programs
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NERRS CTP Monitoring & Evaluation Strategies (by NOAA Regions – continued)													
Reserve	Perf Measures	Attendance Tracking System	External Evals/Studies	Specific Event Evals	Web/Online	Surveys (all types)	Interviews (phone/in-person)	Staff Partners	Media	Progress Reports/Annual Reports	Mailings	Focus Groups	Inquiries
SOUTHEAST REGION													
Ace Basin – SC		X	X	X		X	X			X			
North Carolina – NC		X	X			X			X		X	X	
North Inlet – Winyah Bay – SC	X	X	X	X				X				X	
Sapelo Island – GA	X		X	X		X							X
SOUTHEAST TOTAL	2	3	4	3	0	3	1	1	1	1	1	2	1
	6	7	7	12	4	10	7	1	3	3	4	6	2
	33%	39%	39%	67%	22%	56%	39%	6%	17%	17%	22%	33%	11%

Appendix F: Project Methodology

The GLEFC developed an analytical framework to identify trends and commonalities in the coastal training program (CTP) planning documents of the NERRS. The analysis was conducted through a complete reading and review of the CTP planning documents; telephone interviews with the NERRS CTP Coordinators and/or Education Specialists; and the synthesis of data and information into a matrix format for discussions and analysis with the GLEFC project faculty and staff.

The GLEFC project staff reviewed each NERRS coastal training program planning documents. These documents comprise the five-segment CTP planning activities and include the Advisory Committee protocol, Market Analysis, Needs Assessment, Marketing Plan, and Strategic Plan planning documents developed by each of the NERRS for their respective CTPs. Documents completed by the NERRS *and* approved by the NERRS CTP Oversight Committee as of April 30, 2004, were submitted to the GLEFC and included in the analysis. Guided by this date, planning documents for 18 of the 26 NERRS were available for review. The remaining eight Reserves were in the initial stages of their program development at the time, and as such, were unable to participate. The 18 sets of planning documents included in this analysis were submitted by the following NERRS:

- ACE Basin NERR, Edisto Island, South Carolina
- Delaware NERR, Dover, Delaware
- Elkhorn Slough NERR, Watsonville, California
- Hudson River NERR, Annandale-on-Hudson, New York
- Jacques Cousteau NERR, Tuckerton, New Jersey
- Jobos Bay NERR, Aguirre, Puerto Rico
- Kachemak Bay NERR, Homer, Alaska
- Narragansett Bay NERR, Prudence Island, Rhode Island
- North Carolina NERR, Beaufort, North Carolina
- North Inlet-Winyah Bay NERR, Georgetown, South Carolina
- Old Woman Creek NERR, Huron, Ohio
- Padilla Bay NERR, Mount Vernon, Washington
- Rookery Bay NERR, Naples, Florida
- Sapelo Island NERR, Sapelo Island, Georgia
- South Slough NERR, Charleston, Oregon
- Waquoit Bay NERR, Waquoit, Massachusetts
- Weeks Bay NERR, Fairhope, Alabama
- Wells NERR, Wells, Maine

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The GLEFC examined planning documents for the five strategic elements:

- Advisory Group/Steering Committee
- Market Analysis
- Needs Assessment
- Marketing Plan
- Strategic Plan

Complete sets of planning documents for all five of the strategic elements were available from 15 of the 18 Reserves. Three of the 18 Reserves had not yet completed all five of the strategic elements, but the documents that were completed by these three Reserves and approved by the CTP Oversight Committee are included in this analysis. The planning documents reviewed as part of this analysis (by Reserve) are as follows:

Table 24

Reserve	Advisory Group	Market Analysis	Needs Assessment	Marketing Plan	Strategic Plan
ACE Basin-SC	X	X	X	X	X
Delaware-DE		X	X		
Elkhorn Slough-CA	X	X	X	X	X
Hudson River-NY	X	X	X		
Jacques Cousteau-Mullica River-NJ		X	X	X	X
Jobos Bay-PR	X	X	X	X	X
Kachemak Bay-AK	X	X	X	X	X
Narragansett Bay-RI	X	X	X	X	X
North Carolina-NC	X	X	X	X	X
North Inlet-Winyah Bay-SC		X	X	X	X
Old Woman Creek-OH		X			
Padilla Bay-WA	X	X	X	X	X
Rookery Bay-FL	X	X	X	X	X
Sapelo Island-GA	X	X	X	X	X
South Slough-OR	X	X	X	X	X
Waquoit Bay-MA	X	X	X	X	X
Weeks Bay-AL	X	X	X	X	X
Wells-ME	X	X	X	X	X

Information and data from the documents were recorded into a template developed by the GLEFC (see Appendix B). The template contained a series of questions regarding general program information, including background on the program and an assessment of program stages of development; the operational structure and operating procedures of the Advisory Group/Steering Committee phase; document components, content, and data collection of the Market

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Analysis and Needs Assessment segments; and document components and content of the Marketing Plan and Strategic Plan segments.

The GLEFC conducted follow-up telephone interviews with key NERRS staff to clarify various elements and components of the NERR planning documents and the CTP planning activities conducted at each Reserve. The NOAA CTP Trends Analysis Work Group identified candidates for the telephone interviews. The GLEFC developed a 24-question telephone interview questionnaire (Appendix C) that was pre-tested with three of the NERRS telephone interview candidates. The pre-test candidates were contacted by the NOAA Program Manager to apprise them of the upcoming interview process. The GLEFC then contacted the pre-test candidates to schedule a time and date for conducting the interview. An information letter (see Appendix D) and the telephone interview questionnaire was sent by electronic mail to the pre-test candidates prior to the scheduled interviews to allow time for review of the questionnaire and thoughtful program considerations.

The telephone interviews were conducted with coastal training program coordinators and/or education coordinators and specialists, and other key staff members from the 18 Reserves. An information letter (Appendix D) and the telephone interview questionnaire (Appendix C) were sent by electronic mail to the candidates in advance of the scheduled interview to allow time for thoughtful program considerations.

Data and information collected from the telephone interviews were utilized in developing individual profiles of each Reserve (see Appendix G). Information contained within the profiles includes approaches to program development, outcomes, deliverables, target audiences, partnerships, training providers, training delivery systems, and other program attributes. The profiles were submitted to the respective Reserves for review and comments.

Realizing that different approaches were employed by the Reserves when conducting their individual CTP planning segments, the GLEFC's analysis also combined the discussion from the NERRS telephone interviews with the reading and review of the planning documents. A matrix format was used to qualify the process and outcomes of the NERRS planning documents and telephone interviews. The data collected from the documents, along with the information collected from the telephone interviews, was entered into the matrix, allowing the GLEFC to examine macro-level similarities and common elements across the 18 Reserves.

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Appendix G: NERRS Coastal Training Program Profiles (by Reserve)



Coastal Training Program Profile

Much of the present geographic focus of the ACE Basin National Estuarine Research Reserve centers on the low-county region between Charleston and Beaufort, SC. It is anticipated that the future geographic scope of the ACE Basin NERRS' CTP could expand to all seven counties along the coast of the state. ACE Basin works closely with the other NERR located in South Carolina, the North Inlet-Winyah Bay NERR.

All five phases of the coastal training program development process are complete. Presently the Reserve does not have a CTP Coordinator, since this person was transferred to another program. As such, the Reserve is running the program with the staff resources they currently have available.

In the opinion of the Reserve, the advisory committee and needs assessment phases were both judged to be very helpful. For the Advisory Committee, individuals from partner organizations such as CZM and Sea Grant were recruited to serve on a committee to advise both of the reserves in the state (ACE Basin and North Inlet-Winyah Bay). For the needs assessment, some extra work was involved in obtaining a sufficient response rate among respondents in the more rural areas, but overall the process was useful and helped to identify needs and gaps in terms of what was being provided. The market analysis, marketing plan, and strategic plan phases were all judged to be somewhat useful during this process.

In the opinion of the Reserve, one finding from the needs assessment that was a bit surprising was that a fair number of respondents "did not seem to have an understanding of the environmental principles involved in the issues." Findings from the market analysis indicated that there is a statewide need for coordination among training providers and that CTP Coordinators may be able to address this need, even in the near-term. One recommendation from the market analysis concludes, "If more opportunities are needed for decision-makers to attend training, then materials presented in occasional large workshops might be better presented in many smaller local discussion groups or at routine meetings of local organizations."

In regard to the top program opportunities for the future of the coastal training program, the Reserve sees the potential to develop active advocacy groups within the state, which could potentially benefit nature-based tourism. In addition, the potential to develop a stronger land-use planning model within the state is

Location

Approximately 50 miles southwest of Charleston, SC. The Reserve encompasses parts of Colleton, Charleston, Beaufort, and Hampton counties.

Primary Target Audiences

Property owners associations, university/college faculty, county government staff, and state agency staff. Marketing efforts will also be directed at rural community leaders and other leaders in Colleton County.

Key Issues Addressed

Habitat protection, water quality, best management practices, and land use planning. Infrastructure planning and sewage treatment are the highest priorities for training among municipal officials.

Training Formats & Methods

Workshops, conferences, courses, and field exercises. The training formats most preferred by decision-makers include those involving audience participation and interaction, such as discussions, hands-on activities, and training that utilizes examples – such as case studies.

Key Partners

South Carolina Sea Grant Consortium, Clemson University Extension Program, NOAA Coastal Services Center, the Low Country Institute

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also a direction that future coastal training initiatives could pursue. Addressing this last point, it was pointed out that a number of areas within the state don't have formal zoning regulations in place.

A number of organizations identified as current and anticipated partners were identified in the joint ACE Basin/North Inlet Winyah Bay market analysis as having the most experienced and professional staffs for training on the issues most important to coastal South Carolina. These experienced partners include the South Carolina Sea Grant Consortium, Clemson University Extension Program, and the NOAA Coastal Services Center. Local branches of the University of South Carolina (Beaufort, Salkehatchie, and Orangeburg) could also provide valuable local conference, classroom, or auditorium facilities for interactions with nearby decision-makers.

The ACE Basin NERRS' core partners have essentially remained the same. A new partnership with the Low Country Institute has also been fostered to address the training needs of leaders in rural communities. Reserve staff has also been engaged as participants at county council meetings.

This document was developed by the Great Lakes Environmental Finance Center, Maxine Goodman Lewin College of Urban Affairs, Cleveland State University.

Delaware

National Estuarine Research Reserve

Coastal Training Program Profile

The present geographic focus for the Delaware National Estuarine Research Reserve is statewide. It is anticipated that this statewide focus will remain the future geographic scope for the CTP as well, although regional projects could be pursued through other reserves and institutions. When appropriate, the focus of CTP initiatives could be made more local, such as the watershed level.

The Advisory Committee, market analysis, and needs assessment phases of the CTP development process have been completed. The marketing plan and strategic plan phases would be next, however, the program is in something of a holding pattern at the moment due to several factors. The Reserve is having some difficulty in obtaining matching funds (state matching funds for federal grants), and resources are also not currently available to hire a CTP coordinator. For the marketing plan and strategic plan phases, current plans call for funds to be available in FY 05 or FY 06.

The Advisory Committee, market analysis, and needs assessment phases were all deemed to be somewhat useful, although there were some limitations and difficulties encountered with certain phases. While Reserve staff still meet with the advisory committee, the Reserve indicated that this phase of the process wasn't especially useful due mainly to the fact that the

boundaries and focus of the Reserve were fairly clear and Reserve staff already had a good idea as to what the goals should be. The Reserve feels that making the advisory committee phase a more formalized process that includes some high-ranking individuals might enhance this part of the CTP development process. Creation of the advisory committee was done in-house by the Reserve, through contacts with people and organizations that they had worked with in the past. Reserve staff members were "very involved" with the advisory committee, where small focus groups were utilized as an approach to gather useful information. The Reserve felt that this process worked well.

One of the difficulties that emerged in the market analysis phase was some confusion among respondents on the definition of "coastal training." The term had to be clarified due to the fact that many respondents indicated they didn't do training (based upon the original definition of the term) while it was clear that this was not the case. Another unanticipated finding of this process was that a number of out-of-state firms had provided coastal training within the state, but were "missed" in the original market analysis. Despite these

Location

The St. Jones component of the Reserve is located in Kent County, Delaware. The Blackbird Creek component of the Reserve is located in New Castle County, Delaware.

Primary Target Audiences

Agency personnel, and professional association personnel attend the most coastal resource professional development sessions. Municipal and county officials attend the fewest.

Key Issues Addressed

Wetlands and waterways protections, environmental aspects of land use, land use planning, and livable Delaware. Respondents were also very interested in the impacts of human disturbances on Delaware estuaries and water quality monitoring.

Training Formats & Methods

Field-based programs, continuing education courses, workshops, and technical training programs

Key Partners

Delaware Coastal Zone Management Program, Delaware Department of Natural Resources and Environmental Control, University of Delaware, Delaware State University

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issues, the Reserve felt this phase was helpful in developing the format for training. The market analysis was conducted by an external contractor, and this process was also judged to have worked well.

In addition, while the needs assessment results are not presently being used to drive a focused program, the findings from this phase have proven helpful in putting together one-time events “where we see needs.” Like the market analysis, the needs assessment was conducted by an external contractor. The Reserve felt that this process also worked well. The only change that the reserve would make on a future endeavor of this type would be to narrow the focus of the needs assessment, which in hindsight appeared to be **too** broad. The reserve feels that a narrower focus on a few specific audiences – such as land use planning and water quality – would enhance efforts to address the training needs of coastal decision-makers. The use of focus groups might also be helpful as part of a needs assessment phase.

While the marketing plan and strategic plan phases have not yet been completed, it is the reserve’s opinion that the marketing plan could possibly be incorporated as part of the overall strategic plan.

The reserve’s core partners have remained the same. The Delaware NERR works closely with the Delaware CZM program (Coastal Zone Management – a federal/state partnership housed within NOAA), the Department of Natural Resources and Environmental Control, the University of Delaware, and Delaware State University.

Future program opportunities for the CTP include helping to translate existing research so that coastal decision-makers can use it to make better decisions in areas of land-use planning and water quality issues. In addition, there are other types of coastal training activities within the state that the reserve is examining, such as NEMO – Non-Point Education for Municipal Officials.

This document was developed by the Great Lakes Environmental Finance Center, Maxine Goodman Levin College of Urban Affairs, Cleveland State University.

Elkhorn Slough

National Estuarine Research Reserve

Coastal Training Program Profile

The coastal counties in the Monterey Bay area make up the primary target area for the Elkhorn Slough National Estuarine Research Reserve. Current and potential partner organizations for the Reserve are located in Monterey, San Benito, Santa Clara, and Santa Cruz counties. About 75 percent of those who attend training sessions sponsored by the Reserve come from within a two-hour drive. The focus for future endeavors could expand beyond this scope, due in part to the regional nature of various environmental issues.

All five phases of the Coastal Training Program development process are complete and are currently being implemented. The issues of non-point source pollution and land use planning were identified as key program opportunities to be addressed in future CTP sessions. In particular, developers are another potential group that could become a target audience for the CTP, pending further assessment of the specific needs of this audience.

The needs assessment phase focused on the natural resource conservation educational needs of regional planners and regulators, who were identified as a primary audience in the market analysis phase. Members of this audience frequently attend CTP workshops, and often call upon Reserve staff for information between workshops.

With the exception of the market analysis phase, all phases of the coastal training program were conducted in-house. An external contractor conducted the market analysis. Regarding the marketing plan, the Reserve currently sees a strong interest in its CTP offerings to the extent that there's currently a waiting list for its programs. The needs assessment and strategic plan phases of the CTP were both judged to be very useful. The Advisory Committee phase was rated as somewhat useful, with the only drawback cited being the fact that available meeting time among members was limited.

New training providers that have been identified include the Coastal Training Network (a network of other training providers). The strategic plan documents assembled by the Elkhorn Slough NERR also identify a number of organizations where potential new partnerships could be developed as part of the CTP. These organizations include the University of California Cooperative Extension, the University of California – Santa Cruz, the California Department of Water Resources, the Moss Landing Harbor District, the Santa Clara

Location

Near Moss Landing, CA; approximately 65 miles south of San Francisco. Monterey, San Benito, Santa Cruz, and Santa Clara counties

Primary Target Audiences

Regional planners, regulators, land managers, elected officials, and environmental consultants. Developers are a potential target audience group for the CTP

Key Issues Addressed

Sensitive habitats and species: buffers, wetlands ecology, efficacy of mitigation, endangered species, maritime chaparral

Basic biology, ecology, and resource conservation: restoration ecology, plant ecology, animal biology

Pollution runoff: agricultural BMPs, ecological impacts

Human impact on ecosystem: landscaping, recreation carrying capacity

Invasive/exotic species: Impact/control – terrestrial plants; Impact/control – terrestrial animals

Training Formats & Methods

Workshops with a field component and opportunities to network. Planned formats vary, ranging from seminar workshops, facilitated workshops, field days, and the utilization of web-based information provided on their website.

Key Partners

California Department of Fish and Game, Elkhorn Slough Foundation, California Coastal Conservancy.

Trends Analysis of Coastal Training Programs of the National Estuarine Research Reserve System

County Planning Department, the Santa Cruz Resource Conservation District, the U.S. Department of Agriculture Natural Resource Conservation District, and the U.S. Department of Interior's Fish and Wildlife Service. The Reserve is interested in collaborating with other education programs and training each other in their areas of expertise.

This document was developed by the Great Lakes Environmental Finance Center, Maxine Goodman Levin College of Urban Affairs, Cleveland State University.

Hudson River

National Estuarine Research Reserve

Coastal Training Program Profile

The Hudson River National Estuarine Research Reserve has adopted a regional focus with 10 total counties (five counties on each side of the Hudson River). The watershed area will dominate the future directions of the program.

The Reserve has completed several phases in an assessment of its coastal training program and is currently in the strategic planning portion of the assessment. The Reserve has chosen to identify its program as the Estuary Training Program, rather than the nationally used Coastal Training Program.

Overall, the Reserve has found the various phases to be somewhat useful to very useful. The Advisory Committee became a forum for building the future of the coastal training program, and the marketing analysis helped the Reserve to learn more about the surrounding territory, and what partners and opportunities are available. The needs assessment provided the Reserve with data drawn directly from the audience on which training topics will meet their needs. The marketing plan is not yet completed for the Reserve, but the strategic plan is early in its implementation.

Since some of the phases have only been completed recently, it is too early for the Reserve to fully process any procedural or programmatic changes in program strategy. The Reserve anticipates adding another state agency soon to its partnership base, but there were not any providers that were overlooked prior to the market analysis.

The market analysis relied upon data collected in-house, but an external contractor wrote the analysis and report. The Reserve does not favor using this approach again, since the data collection process was very time consuming. However, one needs assessment, that used a workshop approach with an external contractor, was an approach that the Reserve would feel comfortable using again. The Reserve's staff members were involved to a great extent in developing the Advisory Committee and the strategic plan, and periodically with the market analysis and needs assessment.

Location

Four separate coastal wetland sites located along 100 miles of the Hudson estuary in New York State

Primary Target Audiences

Early decision-maker workshops focused on federal and state agency regulatory and resource management professionals, and resource managers from local environmental nonprofits. Research and government scientists, government resource managers and regulators; recreational organizations and eco-tour operators, and specific local decision-makers including shoreline land managers, watershed representatives and consultants are the current focus.

Key Issues Addressed

Land use planning, stormwater management, biodiversity, nonpoint source pollution control, and watershed protection were identified in the Market Analysis as some of the important topics for the public and private sectors. Invasive species management, habitat restoration, non-point source pollution control and prevention, and recreational use impacts on resources were identified by the Reserve as priority issues.

Training Formats & Methods

Two types of training are offered – scientific issue forums that clarify issues, define future training needs and identify management-oriented research needs; and decision-maker training activities that provide expert and peer learning opportunities and hands-on components.

Key Partners

NYS Department of Environmental Conservation, Hudson River Estuary Program, NYS Department of State Division of Coastal Resources, Hudson River Valley Greenway, NY Sea Grant, Cornell University, NYS Office of Parks, Recreation and Historic Preservation, NOAA's Coastal Services Center.

Trends Analysis of Coastal Training Programs of the National Estuarine Research Reserve System

The Advisory Committee was constructed based on group discussions, and the market analysis utilized an online survey where respondents were contacted and asked to participate, and a cascade effect to identify other providers, with periodic follow-ups to ensure a higher response rate. The needs assessment utilized a workshop approach, some online and paper surveying, and a series of phone calls, depending on which audience was being targeted.

The market analysis uncovered various topics (such as global warming, biodiversity, and land use planning) that have not been adequately addressed and need further attention in the future. The needs assessment revealed that the target audience's knowledge and skills of the Hudson River Estuary were diverse and that there is a demand for additional training. The Reserve also found that scientific issue forums, shoreline and land manager training, and restoration and shoreline treatment training topics are the top three program opportunities for the future of the program. However, the constraints are in addressing the busy schedules of various partners and decision-makers and working with the large geographic scope of the area, with 10 counties with 2.7 million inhabitants spanning both sides of the river for over 100 miles.

This document was developed by the Great Lakes Environmental Finance Center, Maxine Goodman Levin College of Urban Affairs, Cleveland State University.

Jacques Cousteau-Mullica River

National Estuarine Research Reserve

Coastal Training Program Profile

The present geographic scope for the Jacques Cousteau-Mullica River National Estuarine Research Reserve is described as multi-county. As such, the Reserve employs two watershed coordinators to address this present scope. The future geographic scope for the Reserve's coastal training program is anticipated to cover the entire state of New Jersey.

The Jacques Cousteau-Mullica River NERR is presently implementing its coastal training program, with all phases of the program completed as of April 2003. The advisory committee phase of the process was judged to be to be somewhat useful. While the Reserve does not rely heavily on the advisory committee, the committee is helpful in reviewing plans and offering suggestions and ideas. The market analysis and needs assessment phases were also deemed as somewhat useful, but in hindsight, it was felt that both were too broad in focus and that a more specific, narrower approach to the issues would have been more useful.

The marketing plan is viewed as currently evolving, essentially because the process of learning about the audiences' needs and wants is viewed as a continuing process. The strategic plan phase was judged to be very useful, in that it helped to focus the coastal training program. In the Reserve's view, the needs assessment and strategic plan phases of the program are very inter-related. The strategic plan document articulates a desire to have a stronger role for people in the Reserve's satellite facilities. However, there has been some difficulty in achieving this in that it is taking longer than anticipated to "get people up to speed." This may be due partially to the fact that some of these staff people are part-timers.

In regard to their core partners, the Reserve works closely with the Division of Watershed Management, and has worked with the Barnegat Bay National Estuary Program. The Reserve's core partners provide several forms of assistance, including financial resources/funding, instructors and specialists with expertise, and marketing/advertising assistance.

A new content area that the Reserve is now focusing on is helping municipalities implement stormwater management regulations. In particular, the approach of doing "one-on-ones" – working directly with a municipality (as opposed to having a training offering on a general topic, such as urban sprawl) – is an area of opportunity that the Reserve sees for its coastal resources training program.

Location

Tuckerton, New Jersey (southeastern New Jersey)

Primary Target Audiences

Municipal offices, state employees, professional association members, and volunteer organization members

Key Issues Addressed

The impacts of human disturbance on New Jersey estuaries. A newly emerging content subject for the Reserve is in the area of helping municipalities implement storm water management regulations.

Training Formats & Methods

Workshops, continuing education courses, and field trips

Key Partners

New Jersey Department of Environmental Protection's Coastal Zone Management Program, Rutgers Institute of Marine and Coastal Sciences, Rutgers Office of Continuing Education, New Jersey's Ocean County's Planning Department, Barnegat Bay Estuary Program, Rutgers Center for Remote Sensing and Spatial Analysis

Trends Analysis of Coastal Training Programs of the National Estuarine Research Reserve System

Another key role that the Reserve sees as an opportunity is that of being a “connector” between what is being offered and the people who need training courses.

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Jobos Bay

National Estuarine Research Reserve

Coastal Training Program Profile

Established in 1981, the Jobos Bay NERR is the second largest estuarine area in Puerto Rico. The current geographic scope of the reserve is based on demand for specific topical training needs, but the Reserve is focusing on an island-wide strategy for the future.

Jobos Bay is currently in the implementation stage of its coastal training program. The program revolves around key issues such as land use planning, the sustainable use of coastal resources, integrated coastal zone management, environmental legislation, and wetland and watershed protection. The Reserve found each phase of the development of its coastal training program to be very useful because it allowed for the coordination of strategies and personnel and assisted them in identifying gaps and implementing the program.

The Reserve has not implemented any procedural or programmatic changes as of yet, given that implementation has just begun, but new partnerships are being explored and added. The Sea Grant program, as part of the University of Puerto Rico, was instrumental in helping Jobos Bay collect data during each of the phases. The Sea Grant program was considered an external contractor in the marketing analysis and needs assessment phases, but became part of the Reserve during the marketing plan and strategic plan phases.

Various methods were used during each of the phases of developing the coastal training program. During the market analysis, in-depth interviews were conducted with experts in the field, focus groups were convened with various decision-makers, electronic mail surveys were administered to approximately 70 organizations, and an inventory of all programs and activities was aggregated for analysis. The same methods were used during the needs assessment, but a survey was also conducted in communities surrounding the Reserve to determine their needs. The marketing plan utilized the marketing analysis and needs assessment as the basis for further marketing efforts, and the strategic plan was based on the approach of the marketing plan. During each of these phases, the Sea Grant program was heavily involved in the selection of methods.

Few problems were encountered in the data collection process, but the market analysis did reveal that many of the communities were very rural in nature and didn't understand how the coastal training program affected them or could help them. The needs assessment also revealed that local members of the

Location

The Jobos Bay Reserve is located on the southern coast of Puerto Rico between the municipalities of Guayama and Salinas.

Primary Target Audiences

Government organizations, public officials, DNR staff, emergency management agencies, scientists, teachers, farmers, and resource users

Key Issues Addressed

Sustainable development, coastal zone planning, coastal resource management, tourism, urban sprawl, and social processes in the coastal zone

Training Formats & Methods

Formats used by the Reserve include short-term courses, short seminars, and workshops. Among the formats utilized by other training providers, field methods, demonstrations, round table discussions, and case studies were rated as the most effective methods.

Key Partners

The Reserve has a current partnership with the Sea Grant Program at the University of Puerto Rico. Other potential partners include Fundacion Marti Coll (devoted to ecological tourism), The Department of Marine Sciences at the University of Puerto Rico, DNER's Bureau of Coasts, Reserves and Refugees, and the School of Environmental Affairs at Universidad Metropolitana.

Trends Analysis of Coastal Training Programs of the National Estuarine Research Reserve System

community exhibited reluctance in speaking with members of the Reserve at times. However, the Reserve would still approach each of the phases using the same methods.

The Reserve found that there are many people who are interested in land use planning and the use of coastal resources. The needs assessment also found that there are more gaps in training and topical areas than was anticipated. However, several opportunities have emerged, such as new topics, training opportunities, and workshop formats. Time constraints, expertise, and commitment from outside experts still present formidable barriers for the future of the coastal training program.

This document was developed by the Great Lakes Environmental Finance Center, Maxine Goodman Levin College of Urban Affairs, Cleveland State University.

Kachemak Bay

National Estuarine Research Reserve

Coastal Training Program Profile

The Kachemak Bay National Estuarine Research Reserve (KBNER) has completed the Pre-Operational phases and is currently implementing the program. The Reserve's present geographic scope is regionally based, encompassing the entire Kenai Peninsula Borough and the Municipality of Anchorage. Steering Committee Members consist of the Directors from Alaska Sea Grant, Alaska Coastal Management Program, and the Reserve's Research Coordinator and Manager. The CTP focuses on close partnerships it has formed with organizations identified in the Market Analysis, such as the Kenai Peninsula Borough, the Kenai River Center, and the EPA.

The Reserve found each of the Pre-Operational phases to be useful in developing its program. The Reserve is in the process of redoing several of the memberships to the Advisory Committee after the State of Alaska rearranged the coastal program and agency review. The Reserve's market analysis was an extensive and time-consuming phase since it incorporated surveying organizations and agencies across the state. The needs assessment developed a two-tiered approach that analyzed "umbrella" issues and specific "identification" issues to better isolate the needs of various audiences. The Reserve would like to add a media plan to its marketing plan, and the strategic plan is also currently being implemented.

A limited number of programmatic changes have occurred since the strategy was first written, mainly in procedural areas. The Reserve is also aware that the extent of the "training region" will expand and decline based on the types of projects and the amount of funding.

All of the Pre-Operational Phases were conducted in-house by the Reserve, and it was cited that this approach would be used again. This has allowed the Reserve to collect further data easily. A variety of approaches were used during each of the Pre-Operational Phases. The market analysis used an on-line questionnaire via Survey Monkey, which generated a favorable 70-80 percent response rate. The needs assessment used a mixture of survey techniques, including Nominal Group Technique within small focus groups, personal interviews, and questionnaires – both pencil and paper as well as on-line. The marketing plan borrowed from the other reserves.

Location

The Kachemak Bay NERR is located along the coast of Southcentral Alaska.

Primary Target Audiences

- I. Land Use Planning: (land use managers and planners; elected and volunteer policy makers);
- II. Natural Resource Management: (fish and wildlife scientists and managers; Tribal/IRA councils and natural resource specialists; Visitor Services [i.e., ecotourism, charter guides]).

Key Issues Addressed

Coastal erosion, floodplain science and policy, wetland functions, marine derived nutrients, remote sensing applications, invasive species.

Training Formats & Methods

Workshops, conferences, and laboratory/field activities. The Reserve produces interactive video products based on CTP topics to be used as training tools, and to expand the learning opportunities to other regions. The Reserve also provides professional teacher development courses.

Key Partners

Partner organizations include the Kenai River Center, the EPA, and the Kenai Peninsula Borough Coastal Management Program. Additional potential partnerships will be pursued with the Alaska National Maritime Refuge; the Sea Grant Marine Advisory Program, the Alaska Division of Commerce, Community and Economic Development; the Cook Inlet Regional Citizens Commission, and the Alaska Ocean Observing System.

Trends Analysis of Coastal Training Programs of the National Estuarine Research Reserve System

The Reserve identified “coastal dynamics – primarily erosion and flooding concerns” as a primary focus area for the Land Use Managers, Planners, and Policy Maker Audience. They will also focus on providing services and tools for audiences identified with Alaska’s component of the Integrated Ocean Observing System.

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Narragansett Bay

National Estuarine Research Reserve

Coastal Training Program Profile

The Reserve's geographic scope for the CTP is Narragansett Bay and its watershed that encompasses Rhode Island and parts of Massachusetts. The Reserve hopes to expand this focus to the southern portion of the watershed in the future.

The Narragansett Bay NERR has completed all five phases of the coastal training program development process, and is currently implementing its program. The Reserve found the market analysis phase very useful because key partners and target audiences were identified, as well as training gaps. The needs assessment was also felt to be very useful in identifying the needs of the target audience, and the topics the Reserve is now addressing through training. All phases of the CTP were conducted in-house with periodic assistance from Reserve staff. The Reserve indicated it would again use this in-house approach.

According to the Reserve, the formation of the Advisory Committee was not a useful process to the development of the CTP, and a new committee has since been reorganized. The initial Advisory Committee was part of another group with needs and goals separate from that of the CTP.

The Reserve's core partners for the CTP process are Rhode Island Sea Grant and the U.S. EPA Region I. The Reserve has since included the Rhode Island Association of Conservation Commissions as a new partner. As part of the CTP, these partners provide facilities, instructors, technology and/or technological expertise, and marketing assistance. Future partnering plans include sponsorships of other agency and organization training programs and outreach efforts; inviting others to offer coastal decision-maker programs or to post information on the Reserve's website; and promoting efforts on the original partners' websites.

Study findings identified some current training gaps and potential opportunities that could be addressed through the Reserve's CTP. One identified opportunity involves the effort to link all training, education, and outreach efforts to the enhancement of community assets. Another potential opportunity involves providing municipal volunteers and staff with information on wetlands ecology, impact of invasive species, endangered species in the community, urban sprawl, recreation/tourism development, and planning town-wide greenways. It was determined that this information should focus on preferred legal and planning techniques, and include biological information as well so that a basic understanding of natural processes can also be provided to this audience.

Location

In the center of Narragansett Bay, 12 miles south of Providence, RI

Primary Target Audiences

Priority target audiences are councilmen, selectmen, planning board members, and conservation commissions; secondary target audiences are the harbor commission, economic developers, zoning board and municipal land trusts members.

Key Issues Addressed

Wetlands ecology, impact of invasive species, endangered species in the community, urban sprawl, recreation/tourism development, planning town-wide greenways, water supply and water quality. Future training topics also include economic development/growth, planning/management, science, and public administration.

Training Formats & Methods

Workshops and conferences were the formats used most often to provide training services. Online training and distance learning were the least used approaches.

Key Partners

Rhode Island Sea Grant, U.S. EPA Region I, and the Rhode Island Association of Conservation Commissions

Trends Analysis of Coastal Training Programs of the National Estuarine Research Reserve System

Some additional program opportunities identified by the Reserve include: 1) Developing a training manual for every conservation commissioner in the state; 2) Working with the Governor's Bay Commission for Smart Growth Rhode Island to promote growth centers in the state; and 3) Working with Rhode Island Sea Grant to develop technical documents on nutrients, and on training and workshops.

This document was developed by the Great Lakes Environmental Finance Center, Maxine Goodman Levin College of Urban Affairs, Cleveland State University.

North Carolina

National Estuarine Research Reserve

Coastal Training Program Profile

The North Carolina NERR is comprised of four Reserve components totaling 9,847 acres along coastal North Carolina. The North Carolina Coastal Training Program (CTP) efforts are focused on North Carolina's 20 coastal counties. The primary target audiences are local municipal officials and real estate professionals.

The Reserve has all phases of CTP planning completed and has been conducting training since 1997. The CTP works closely with partners to develop the training curriculum and regularly communicates by email with its Advisory Committee for feedback and technical assistance. One of the most notable changes to the CTP's objectives includes relying on email communications with the Advisory Committee rather than formal meetings. Its relationships with core partners have remained essentially the same over the program's development. The North Carolina NERR is working to develop a core curriculum that is used throughout its geographic region, with adjustments as necessary for specific audience needs.

The data gathering and planning for its Market Analysis and Needs Assessment was conducted in-house due to the Reserve's reliance on existing institutional memory, experience, and partner relationships. The marketing plan was developed through an upgrade of the Reserve's existing K-12 and professional development programs. Its existing methods of marketing have been successful and continue to be utilized. Marketing elements include a strong web presence, database management, cross promotions with partners, and a marketing protocol checklist.

The North Carolina NERRS' top training priorities are storm water management, microbial pollution, septic system health, grant writing, clean marinas, and community planning. Top training challenges are the Reserve's ability to consistently meet the needs of all 20 coastal counties, ensuring sufficient promotion/advertising, and development of new and interesting programs in a timely, consistent manner.

Location

The Reserve is comprised of four site components located near Corolla (Currituck Banks), Beaufort (Rachel Carson), and Wilmington (Masonboro Island and Zeke's Island). Since the North Carolina Division of Coastal Management (whose geographic scope is North Carolina's 20 coastal counties) jointly manages the Reserve, the CTP conducts training in these 20 counties.

Primary Target Audiences

Local municipal officials, real estate professionals, government agency staff, NGOs, land use planners, landscapers and marina operators

Key Issues Addressed

Storm water management, microbial pollution, septic system health, grant writing, clean marinas, and community/local planning

Training Formats & Methods

Workshops, Internet-based training, technical publication series, and a web presence that provides a "clearinghouse" of information

Key Partners

NOAA, North Carolina Coastal Nonpoint Source Program, Albemarle-Pamlico National Estuary Program, North Carolina Department of Environment and Natural Resources, North Carolina State University, University of North Carolina at Wilmington, University of North Carolina at Chapel Hill, Duke University, Marine Graphics, Eastern Carolina Council of Governments

North Inlet-Winyah Bay

National Estuarine Research Reserve

Coastal Training Program Profile

Located in Georgetown, South Carolina, this Reserve comprises over 12,000 acres in Georgetown County. The CTP focuses on Georgetown and Horry counties, with a particular emphasis on decision-makers within the Reserve watershed. Training audiences typically include a number of decision-makers from outside this two-county region. CTP activities will continue to reflect a watershed-based approach that emphasizes management decisions based on natural ecological boundaries and watershed and sub-watershed drainage areas, as opposed to political boundaries.

The CTP is fully implemented and operating in a fashion that is consistent with the results of the Needs Assessment. In addition to the central partners defined at the inception of the program (NOAA Coastal Services Center, SC Department of Health and Environmental Control – Office of Ocean and Coastal Resource Management, SC Sea Grant Consortium, and the ACE Basin NERR), a number of additional training providers have become partners in planning implementation, including: Coastal Carolina University's Waccamaw Watershed Academy, Clemson Extension's Carolina Clear Program, and the Waccamaw Riverkeeper Program. All Needs Assessment and Market Analysis data gathering and analyses was conducted in-house, and all planning and implementation was developed in-house, with leadership provided by the CTP coordinator.

The outcomes of the Needs Assessment revealed some unanticipated findings in format preferences and programming, but these have all been incorporated into the program and marketing strategy currently being implemented. Top program opportunities include: 1) involvement in local watershed planning and protection via training, planning, and ordinance review; and 2) working closely with residential neighbors for better land use and management decisions. Top challenges include: 1) the pervasive growth-oriented attitude of public officials and coastal decision-makers; 2) lack of audience awareness about the connection between CTP, the NI-WB NERR, and the other entities represented on the Belle W. Baruch Foundation property; and 3) the need for stronger linkages, integration, and cooperation across the sectors at the Reserve.

Location

Georgetown, South Carolina. The primary geographic focus area for the NI-WB CTP is Horry and Georgetown counties.

Primary Target Audiences

Municipal and county public officials in Horry and Georgetown counties are included in the primary target audience. The audience focus may be expanded to include public officials in Charleston and western counties within three to five years.

Key Issues Addressed

Local watershed planning and protection with an emphasis on stormwater management, land use planning and decision-making, coastal erosion, and shoreline management

Training Formats & Methods

Workshops, technical training sessions, targeted presentations, and field activities

Key Partners

NOAA Coastal Services Center, SC Department of Health and Environmental Control – Office of Ocean and Coastal Resource Management, SC Sea Grant Consortium, and the ACE Basin NERR

Old Woman Creek

National Estuarine Research Reserve

Coastal Training Program Profile

The Reserve is comprised of 573 acres adjacent to Lake Erie in Huron, Ohio. The CTP currently serves seven coastal counties along the southern shore of Lake Erie. A CTP Coordinator was hired in fall 2004 to implement all phases of the program.

Three primary partners form the Executive Committee of the CTP: Old Woman Creek NERR, the Ohio Department of Natural Resources Coastal Management Program, and the Ohio Sea Grant Program. Together, these three entities have developed most phases of the CTP planning documents. Heavy reliance on the core partnership of the three entities was key to planning.

Program objectives have been agreed upon from the planning efforts of the three partners. A protocol for developing and operating the Advisory Committee has been developed but appointment of Advisory Committee members is pending upon the hiring of the CTP Coordinator, as is the development of the final Marketing Plan.

The top program opportunities include: 1) establishing a menu of core courses that meet standards of quality; 2) creating a clearinghouse of training in coastal counties with a successful evaluation component; and 3) leveraging funding through continued partnership with core partners. The top challenges or barriers for the future of the CTP include: 1) funding and match requirements; 2) maintaining high standards of excellence; 3) maintaining current level of support from core partners, and 4) qualified staffing.

Location

Located in Erie County, Ohio, approximately three miles east of Huron. The current geographic scope of the Reserve includes seven coastal counties along the south shore of Lake Erie.

Primary Target Audiences

Elected and appointed public officials, local and state environmental agencies, land managers, NPOs, and consultants.

Key Issues Addressed

Economic aspects of coastal resource management and protection, Lake Erie shoreline and water resources, land use/infrastructure, public health, cultural resources, and providing consistent quality information, along with improved sharing of resources.

Training Formats & Methods

Preference for regionally based workshops (so travel could be minimized) and a web-based clearinghouse of information.

Key Partners

Ohio Sea Grant

Padilla Bay

National Estuarine Research Reserve

Coastal Training Program Profile

Padilla Bay's Coastal Training Program has a state-wide focus, with the majority of classes being taught on the western side of the state. All phases of the CTP planning documents have been completed and the Reserve is implementing the program.

The Reserve utilizes its Advisory Group in short and long-term program planning and for providing feedback on course design. Core partners include the Washington Department of Ecology, Washington Sea Grant, and the Puget Sound Action Team. All planning phases were conducted in-house with the assistance of the Advisory Group and staff. Survey Monkey was a popular tool utilized in the Needs Assessment phase and continues to be used in follow-up evaluations.

A surprising outcome of the Needs Assessment was little interest in on-line learning. The strongest interest was in full-day workshops that include a field or hands-on component. Padilla Bay is committed to offering core classes on a regular basis. These classes will be augmented with advanced and "hot topic" classes. Some of the top program opportunities are: 1) Offering training topics that support local counties in updating their Shoreline Master Plans; 2) Wetlands training; and 3) Trainings on alternatives to shoreline stabilization and modification. One of the top challenges to the program is overall funding.

The Reserve continues to seek opportunities to collaborate regionally with other partners.

Location

The Reserve is located in North Puget Sound, near Anacortes, Washington.

Primary Target Audiences

With this program's statewide focus, target audiences will include local shoreline and watershed planners, local natural resources staff, permit reviewers, habitat biologists, tribal planners and resource managers, and consultants.

Key Issues Addressed

Providing shoreline communities with technical assistance, especially in the area of updating shoreline master plans. Other key issues are shoreline modifications, laws, buffers, near shore habitats, and wetlands. Providing a consistent offering of core trainings was also deemed to be important.

Training Formats & Methods

Workshops and field exercises.

Key Partners

Sea Grant, Washington State Department of Ecology and the Puget Sound Action Team. Potential opportunities to partner with other organizations like the WSU Extension program, the Office of Community Development, and DNR could be explored.

Rookery Bay

National Estuarine Research Reserve

Coastal Training Program Profile

The Reserve's service area consists of the three counties that encompass the NERRS. The staff anticipates expansion of the service area to include the entire region of southwest Florida from Tampa to Naples. This expansion is based on the recognition that this area is geographically similar to the Rookery Bay region, with similar needs and target decision-makers.

The program development process was completed in March 2002 and is in the implementation stage. The CTP coordinator found the role of the Advisory Committee and the development of the strategic plan to be very useful for the program. The strategic plan is being used to prioritize and focus CTP activities. Less utility was derived from the market analysis and marketing plan development. This was in part due to Rookery Bay completing these stages before most of the other NERRS CTPs, which meant the Reserve had little guidance for its completion.

Two changes during the course of the planning process were noted: the Advisory Committee, which was very useful at the beginning for generating ideas and broad direction, has been modified to a smaller working group consisting of the five key partners; the programs of the CTP have been refocused on one audience (land use decision-makers) and focused on strategic actions as a result of the market study and needs assessment.

The facilitation of the Advisory Committee was in-house; the market analysis and needs assessment stages were completed by an external contractor. The information for the market analysis and needs assessment was gathered through surveys, with in-house follow up on the needs assessment data collection through focus groups. The strategic plan was developed in conjunction with a review of the overall Reserve Management Plan to ensure that the two plans meshed. The strategic plan was completed in-house, as was the marketing plan. On reflection, the CTP staff suggests that the needs assessment should have been conducted in-house and the marketing plan been developed by an external consultant specializing in this activity. The Reserve staff was involved to a great

Location

The Reserve is located five miles south of Naples, Florida.

Primary Target Audiences

Target audience groups include local land use decision-makers, including planners, coastal regulatory/law enforcement officers, developers, elected officials, marine industry and enforcement, planning commissions and advisory boards, realtors, and print and broadcast media.

Key Issues Addressed

Key coastal resource issues include land use planning and impacts on resources, as well as endangered species, fishing regulations, and poaching. Training topics addressed in the strategic plan include rapidly changing land use in watersheds and coastal areas and its impacts on wildlife habitat, hydrology, and coastal water quality; the decline of native biodiversity due to exotic species and fire suppression; impacts of careless or incompatible public use of the Reserve; and the impacts of catastrophic events upon natural resources in the Reserve.

Training Formats & Methods

Face-to-face workshops over other formats, such as distance learning, cd-rom based opportunities, lectures, or brochures. Preference for a hands-on component to training (such as field trips); offerings of certification and continuing education credits rated as top incentives for training.

Key Partners

Current and potential partners include Sea Grant, the Nature Conservancy, West Coast Inland Navigation District, Florida Keys National Marine Sanctuary, Florida Institute of Oceanography, NOAA Coastal Services Center, Council for Sustainable Florida, and the University of Florida's TREEO Center (Center for Training, Research and Education for Environmental Occupations).

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extent on the advisory committee and in the development of the strategic plan, but only periodically or not at all for the other phases. The CTP staff noted that the greatest concern with the phases stems from the market analysis, which did not identify all the providers adequately and was not structured to elicit more than short responses from respondents. The marketing plan was completed very early in the national process, and its focus is too wide to have utility for specific actions. For both the market analysis and the needs assessment, the CTP staff suggests that updates to the process be completed using online survey instruments with follow up phone calls and focus groups, respectively.

The CTP staff was surprised at the outcomes of the market analysis and needs assessment. The market analysis revealed few training providers in the CTP service area; however, there is a caveat here regarding the methodology used to identify potential providers. The data gathering process also revealed that many of the organizations that identified themselves as training providers are not delivering what the CTP would consider coastal training. Regarding the needs assessment, they were surprised at the almost complete lack of interest among potential trainees on “techy stuff;” that is, they wanted face-to-face workshops, not distance learning or cd-rom based training materials. The three top opportunities identified through the planning process were the need for partnerships in the face of the high level of land use growth; the need to take the show on the road to local governments rather than expecting them to come to the CTP; and the need to be objective in the information disseminated, in that policy people don’t trust advocacy groups, and they need the CTP to be informational. The top barriers are limited resources (staff and funding); maintaining the identity of the CTP in the face of many groups involved in resource management issues; and finding instructors with credentials to meet the demand for more and more training, particularly for repeat programs in different locations. Finally, the planning process has indicated how important it is to target an audience that has great influence and to stay with their needs and education in order to make a difference on coastal resource issues.

Sapelo Island

National Estuarine Research Reserve

Coastal Training Program Profile

The Sapelo Island NERR (Sapelo Island, Georgia) Coastal Training Program (CTP) includes the 11 coastal counties designated by the Georgia Coastal Management Program. This region includes several counties beyond the estuarine boundary and within the watersheds of the coast's five major rivers. The Reserve intends to expand its CTP into Atlanta in the future.

The Sapelo Island NERR is currently implementing its coastal training program, with all phases of the program completed in April 2003. The market analysis identified several training providers who share a common challenge of stimulating attendance for training sessions. Providers identified since the completion of the market analysis are land and estuary in-shore groups, coastal and deep water groups (those doing research in deeper water offshore), and commercial or recreational fishing groups.

The needs assessment phase did not yield the responses or outcomes anticipated by the Reserve. This, in the opinion of the Reserve, is because of its target audience choice of elected municipal and government officials, combined with the distraction of an election. The Reserve has since discovered that a market niche exists for realtors and construction company professionals and has altered its CTP to incorporate these audiences. The training topics remain the same but have been re-prioritized due to the new audiences. The strategic plan is considered a synthesis or compilation of the market analysis and needs assessment documents that was useful in helping to summarize the Reserve's program and inform its partners.

A coastal training coordinator was hired in November 2003 and now provides in-house services that were previously contracted. The coastal training provider is staffed by the Reserve and the Georgia Department of Natural Resources. The CTP coordinator is responsible for implementing the marketing plan and for developing the strategic plan into an action plan.

The original partners of the CTP are the Sapelo Island NERR, the University of Georgia Marine Extension Service, The Nature Conservancy, and the Georgia Coastal Management Program. The Reserve found

Location

The Reserve is located 7.5 miles northeast of Darien, Georgia. The program serves the coastal counties of Brantley, Bryan, Bulloch, Camden, Chatham, Effingham, Glynn, Liberty, Long, McIntosh and Wayne.

Primary Target Audiences

Elected and municipal officials, property owner associations, volunteer groups, government agency representatives, research/scientific community

Key Issues Addressed

Water resource issues: surface & aquifer/groundwater management, water quality, storm water management, volunteer monitoring, point and non-point source pollution

Natural habitat issues: best management practices, estuarine ecology, isolated freshwater wetlands, environmental contaminants

Coastal development issues: environmental law/regulation, land use planning, recreational uses/impact on coastal system, beach processes/erosion control, economic development, solid waste disposal, nature-based tourism, coastal disaster response

Training Formats & Methods

Seminars, workshops, lectures, field exercises, presentations, hands-on demonstrations, opportunities for discussion

Key Partners

Georgia Department of Natural Resources, University of Georgia Marine Extension Service, The Nature Conservancy Altamaha Ecoreserve, Georgia Coastal Management Program, Georgia Sea Grant College

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that, through the market analysis phase, other providers became aware of the fact that the Sapelo Island NERR provided training, and as such, this has led to partnership opportunities.

New partners with the Sapelo Island CTP are the DNR Environmental Protection Division, The Georgia Conservancy, and the NOAA Gray's Reef National Marine Sanctuary. The partners provide training facilities, instructors and specialists, technology and/or technological expertise, marketing/advertising assistance, and staff to handle arrangements and scheduling for training.

All phases of the coastal training program were conducted in-house, with outside contractors utilized for its market analysis and needs assessment. The University of Georgia Survey Research Center assisted in the compilation and interpretation of data for the market analysis and needs assessment. While the marketing and strategic plans were developed in-house, the Reserve's Advisory Committee reviewed the plans prior to completion. Reserve staff was involved periodically in the development of the program phases, but was involved to a greater extent in the development of the Advisory Committee.

The Reserve utilized existing partnerships to form its Advisory Committee and feels that it could have incorporated this group on more levels throughout the development of the CTP. Data collection for the market analysis and needs assessment was conducted by mail and fax survey. The outcomes of the Reserve's market analysis and needs assessment were utilized to develop its marketing and strategic plans. Overall, the Reserve states its challenge is to stimulate attendance in some manner for the CTP, and at the same time, increase recognition of the CTP and of the Reserve system.

South Slough

National Estuarine Research Reserve

Coastal Training Program Profile

South Slough National Estuarine Research Reserve (South Slough NERR), located in Oregon, has adopted a regional approach for its coastal training program. The Reserve anticipates that its future geographic scope will be determined by NERRS definitions and input from discussions based on Integrated Ocean Observing System (IOOS) data, which may change and widen the scope of the geography in the future.

The Reserve is in the implementation stage of its coastal training program. The advisory group was a very useful phase in the development of the program since it reviewed the potential training topics and findings of the market analysis and provided advice for future directions of the program. The Reserve found the market analysis to be somewhat useful, since it was initiated by the prior CTP coordinator and was later continued by the new coordinator. This required a learning curve and evaluation period. The needs assessment was also perceived of as being somewhat useful and utilized a survey of a selected group of decision makers. The Reserve has not had enough time to properly market the CTP, but the strategic plan will help it prioritize the CTP mission and keep the program focused on priority themes.

The most important result of the pre-implementation phases was the identification of the six priority coastal training themes by the Coastal Training Advisory Group (see Key Issues Addressed). The advisory group ranked the topics of primary or secondary importance. Primary topics included habitat restoration, water quality management, MPAs and invasive species management. Secondary topics included managing visitor impacts and impacts of climate change on coastal communities. Current strategy focuses on habitat restoration and invasive species management. South Slough NERR provides CTP funds to partners to facilitate training.

All of the various phases were conducted in-house, but the Reserve would only use this approach again for the advisory group and the strategic plan. If the market analysis, needs assessment, and marketing plan were conducted again, an external consultant who is better versed in social science methodology and

Location

Five miles south of Charleston, Oregon, on the south slough of the Coos Bay estuary

Primary Target Audiences

County and city planners, elected officials, consultants, contractors/developers/landscape architects, scientists and restoration ecologists, land use managers, watershed groups, coastal managers and environmental professionals, agricultural operators, shellfish growers, fish processors, commercial fishermen, and government agencies

Key Issues Addressed

Priority coastal training themes include: Water quality issues; coastal wetland and estuarine habitat restoration; invasive species control and management; managing visitor impacts; management alternatives for nearshore environments (Marine Protected Areas, or MPAs); and the impact of climate change on coastal communities.

Training Formats & Methods

Coastal decision-maker workshops (typically informal, day-long events), lecture series, seminars, and issue papers, case histories and other publications.

Key Partners

The Coos Watershed Association, the Lower Columbia River Estuary Program, the Oregon Coastal Environments Awareness Network (OCEAN), and the Tillamook County Performance Partnership. Newer/emerging partners include the Oregon Invasive Species Council (Education and Outreach Subcommittee), the Coos County Weed Advisory Board (Education Subcommittee), the Oregon International Port of Coos Bay, and the Oregon State University Extension Sea Grant/Watershed Stewardship Education Program.

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survey use would be utilized. The Reserve staff members were involved to a great extent in selecting the advisory group, but less frequently for the other phases.

The advisory group was assembled based upon group discussions and staff inquiries. The market analysis used telephone and email surveys, and the needs assessment used a mail survey and a series of telephone interviews. The marketing plan was based upon individual consultations with staff members and the Estuarine Research Division, and the strategic plan was also based on individual consultations with staff. The Reserve did not reference any notable shortcomings in the use of these techniques.

Based on the advisory group's opinions, the Reserve has determined that the top three program opportunities for future coastal training include training related to habitat restoration, management alternatives for nearshore ocean environments (Marine Protected Areas or MPAs), and invasive species control/management. Major challenges include addressing local and regional concerns about the impacts of MPAs on commercial fishing and related businesses, the impact of accelerated watershed restoration on agricultural lands, and social perceptions regarding invasive species. Future challenges will continue to include identifying training needs and target audiences, and directing social scientists to evaluate community needs and perceptions.

Based on its findings, the Reserve has found that the top three program opportunities for the future of the CTP involve habitat restoration, managing the impacts of visitors on the local environment, and invasive species. Major challenges, such as determining what the training needs are and who should comprise the target audiences (along with utilizing social scientists to evaluate the environment) will present anticipated constraints in the future.

Waquoit Bay

National Estuarine Research Reserve

Coastal Training Program Profile

The geographic scope of the Waquoit Bay NERR is statewide, encompassing all coastal Massachusetts. The Reserve is also expanding its training, educational and outreach efforts to work with other states in New England.

The Waquoit Bay NERR has completed all five phases of the coastal training program development process. The Advisory Committee and Needs Assessment phases were both rated as very useful, while the other phases of the process (Market Analysis, Marketing Plan, and Strategic Plan) were judged to be somewhat useful. Regarding the market analysis, the Reserve has expressed some concerns that this study did not delve deeply enough into the topics examined and that the consultants who conducted the study "didn't go deep enough into the market we knew existed." Based upon these concerns, the Reserve has given consideration to the possibility of conducting another market analysis using the services of another group. Regarding the needs assessment study of municipal officials, a similar concern that this study's focus was perhaps too general and not focused enough was also voiced by the Reserve. In particular, there was some concern about potential mixed messages concerning the issue of whether people wanted information or training. A second needs assessment of representatives from non-governmental organizations has now been completed.

The market analysis conducted by the Waquoit Bay NERR identified several popular training topics, including habitat and stream protection and restoration, coastal processes, and wetlands protection; but, several other coastal training topics are also important, such as renewable energy use, climate change, invasive species, and atmospheric nitrogen deposition.

Like the market analysis, the needs assessment that was conducted also identified several key areas as topics that should be addressed in future training efforts, including wetlands and waterways protection, land use planning, marine pollution, open space protection, and habitat protection and restoration. While these and other issues demonstrate some of WBNERR's current coastal training efforts, the Reserve also strives to ensure that leading edge issues identified by research also make it to the CTP agenda. Some respondents in the needs assessment study also suggested that training offerings should seek the endorsement/approval of relevant professional associations, and make this known to participants. At

Location

The towns of Falmouth and Mashpee, on the south shore of Cape Cod

Primary Target Audiences

Municipal officials, agency staff, non-governmental organizations, businesses, academic/research institutions and associations, and legislators and staff

Key Issues Addressed

The most popular topics for coastal training are habitat and stream protection and restoration, coastal processes, wetlands protection, climate change, invasive species, atmospheric nitrogen deposition, and renewable energy use. Additional areas identified as topics for future training include land use planning, marine pollution, and open space protection.

Training Formats & Methods

Various formats are currently being utilized to provide training services, including workshops, seminars, field courses, web based information dissemination, one-to-one consultations, and demonstration projects.

Key Partners

WBNERR, together with the Massachusetts Office of Coastal Zone Management and the Woods Hole Oceanographic Institution's Sea Grant Program, comprise the CTP Steering Committee. Important partners include the Cape Cod Commission, the Association to Preserve Cape Cod, homebuilders and realtors, many towns and municipalities, and several others depending upon the topic being addressed.

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WENERR, the CTP also includes training and partnering with such businesses as homebuilders, realtors, plumbers, and landscapers. The possibility of offering some training sessions in conjunction with professional conferences was also mentioned.

In addition to the Reserve's current partners, a number of potential future training partners have also been identified, including UMASS Boston, MIT Sea Grant, the MASS Bays Program, the Buzzards Bay Program, and the Massachusetts Association of Conservation Commissioners. The market analysis study also indicated an interest on the part of some educational institutions for pursuing partnerships with the CTP to offer non-degree training. Potential partners in this effort are Cape Cod Community College and the Massachusetts Maritime Academy.

Although successful coastal training has been performed at WBNERR for over 10 years, the Reserve has described the CTP process as one that is "evolving" and adds they have examined both short-term and long-term plans for the training they want to conduct. Over time, the Reserve also states that topics and issues may be shifted due to specific situations that may arise in response to direct outside requests, or because of issues that become more important to the Reserve and its primary goal of fostering better coastal and estuarine management.

This document was developed by the Great Lakes Environmental Finance Center, Maxine Goodman Levin College of Urban Affairs, Cleveland State University.

Weeks Bay

National Estuarine Research Reserve

Coastal Training Program Profile

The service area of the Weeks Bay Coastal Training Program is currently focused on the two coastal counties in Alabama (Baldwin and Mobile) and Escambia County, Florida. Based on results of the market and needs studies, the future service area may be expanded to the counties further north that directly impact coastal Alabama. These areas have a significant effect on coastal and estuarine resources and are well within a comfortable driving distance for potential trainees.

The CTP program used an external contractor, the South Alabama Regional Planning Commission, to conduct the market analysis, needs assessment, and program strategy. The data were collected using survey questionnaires, and the results were reviewed by the Advisory Committee and NERRS staff. The CTP staff found the process of investigating the current status of training programs to be a very useful exercise. The survey results reflected substantial gaps in providers and their available programs. Staff noted that the short turn-around time frame for the projects precluded more extensive review of the phase results by the Advisory Committee throughout the process. The market analysis, needs assessment, and strategic plan were instructive for informing the new Coordinator about job responsibilities and priorities. All stages have been completed and approved with the exception of the Marketing Plan. The Marketing Plan was submitted by the CTP Coordinator for approval in April 2004. The Plan will be revised based on comments by the CTP Oversight Committee and re-submitted in November for their further review. The program expects to begin the implementation stage soon.

The three top program opportunities include development of an interactive web site; establishment of the program as a "go-to" source for environmental resource information in south Alabama; and connecting research results to the audiences that need information, particularly to previously under-served groups.

Barriers to the success of the CTP program and its development are the slow bureaucratic processes dealing with funding and associated contract agreements.

Location

The Reserve is located in Baldwin County on Mobile Bay's eastern shore, approximately 40 miles southeast of Mobile, Alabama. The physical address is 11300 U.S. Highway 98, Fairhope, AL 36532.

Primary Target Audiences

Elected officials, public works staff, planners, engineers, and especially volunteers on decision-making boards.

Key Issues Addressed

Reduction of non-point source pollution, land use management practices on coastal and estuarine habitats, protection of water resources, preservation of biodiversity, and management of invasive species.

Training Formats & Methods

Workshops and short lectures by expert speakers that incorporate hands-on activities, demonstrations, and field trips.

Key Partners

Potential collaborations between the Weeks Bay NERR and the Mississippi coastal Grand Bay NERR are being explored. There is also potential to enhance and strengthen existing training partnerships between federal, state and local agencies and organizations along the central Gulf coast. Other training providers and potential partners include the Alabama Coastal Foundation, the Alabama Cooperative Extension – Baldwin County, Alabama Department of Environmental Management, Auburn Marine Extension and Research Center, Baldwin County Health Department, Dauphin Island Sea Lab, Mississippi-Alabama Sea Grant Extension, Mobile Bay National Estuary Program, NRCS – Baldwin County, South Alabama Regional Planning Commission, Weeks Bay Reserve Foundation, and the Weeks Bay Watershed Project.

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The outcome of the entire process was positively influenced by the availability of national training events for the CTP staff about program processes, and in capacity building for planning and management through support and collaboration.

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Wells

National Estuarine Research Reserve

Coastal Training Program Profile

The primary geographic scope of the Wells NERR centers on the southern Maine coastal communities between the New Hampshire border and Portland. A wider, secondary geographic focus encompasses the Gulf of Maine, extending from Massachusetts to Nova Scotia. Potential expansion of the CTP could encompass this secondary area.

The Wells NERR has completed all five phases of the coastal training program development process. All phases of the process were rated as very useful, with the exception of the marketing plan phase, which was judged to be somewhat useful. The market analysis was assessed as "excellent" in serving as a starting point, while the needs assessment helped to corroborate some of the ideas heard in the market analysis and identify issues and needs among the training audience. The strategic plan phase was deemed to be very useful as a planning tool. However, while the market analysis phase was judged to be very helpful, there is some concern on the Reserve's part that at least part of the market may have been missed in the study.

In the opinion of the Reserve, one finding from the market analysis that was a bit surprising was the identification of municipal officials as a key target audience that consistently came out on top of everyone's list. A particular finding from the needs assessment that was also a bit surprising was the emergence of wildlife habitat conservation as an important topic. The Reserve indicated that it is constantly revising or updating its program based on the belief that an effective CTP program is always evolving. The effort to incorporate new scientific and environmental information into the program should be undertaken, as well as the effort to continually improve all aspects of the program.

Specific topics identified as top program opportunities for the future of the Reserve's CTP include watersheds, land and resource conservation, and pollution, runoff, and water quality. Additionally, providing a "suite" of services that includes GIS and capacity-building is another top program opportunity for the CTP. In addition, the opportunity to help create a community of practitioners and scientists who can convene to discuss relevant topics and issues is also seen as an important and valuable opportunity for the Reserve's CTP.

Location

Laudholm Farm in Wells, Maine

Primary Target Audiences

Municipal officials, a segment that includes town managers, selectmen, planners, code enforcement officers, planning boards, and conservation commissions. Additional target audience groups, including land trusts, state and federal employees, and the general public, will also be addressed during the initial stages of CTP program development.

Key Issues Addressed

The Reserve's work with watersheds and water quality was identified as a top program opportunity for the future of the Reserve's CTP. Land and resource conservation is another training area addressed by the CTP.

Training Formats & Methods

Workshops and presentations were among the most frequently cited training delivery methods. Field based/on-site workshops were rated by training providers as the most effective type of training.

Key Partners

Southern Maine Regional Planning Commission, Maine Coastal Program, Maine Sea Grant, Department of Environmental Protection - Non-Point Source Education for Municipal Officials (NEMO)

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The CTP Advisory Committee has decided on four primary partnerships for the initial phase of the program. The Southern Maine Regional Planning Commission, the Maine Coastal Program, and Maine Sea Grant were already represented on the Advisory Committee. An additional partnership was also recommended with the Department of Environmental Protection - Non-Point Source Education for Municipal Officials (NEMO). A working partnership between the Reserve and NEMO has now been developed.

In many ways, the Reserve's Coastal Mosaic Project served as a prototype for the CTP by building a network of municipal officials, conservation commissions, land trusts, and watershed associations which shared information through meetings, workshops, and a list-serve maintained by the Reserve. Collaboration and networking through the Coastal Mosaic Project has helped the Reserve's staff identify and respond to community conservation needs, design workshops and information services, and to cultivate relationships with local community decision-makers.

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